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NOMINATIONS OF H. ROBERT HELLER AND MICHAEL L. MUSSA

HEARING

BEFORE THE

COMMITTEE ON BANKING, HOUSING, AND URBAN AFFAIRS UNITED STATES SENATE

NINETY-NINTH CONGRESS

SECOND SESSION

ON

THE NOMINATIONS OF

H. ROBERT HELLER, OF CALIFORNIA, TO BE A MEMBER OF THE BOARD OF GOVERNORS OF THE FEDERAL RESERVE SYSTEM FOR THE UNEXPIRED TERM OF 14 YEARS FROM FEBRUARY 1, 1982, VICE PRESTON MARTIN, RESIGNED

AND

MICHAEL L. MUSSA, OF ILLINOIS, TO BE A MEMBER OF THE COUNCIL OF ECONOMIC ADVISERS, VICE WILLIAM POOLE VII, RESIGNED

AUGUST 5, 1986

Printed for the use of the Committee on Banking, Housing, and Urban Affairs

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NOMINATIONS OF H. ROBERT HELLER TO BE A MEMBER OF THE BOARD OF GOVERNORS OF THE FEDERAL RESERVE SYSTEM AND MICHAEL L. MUSSA TO BE A MEMBER OF THE COUNCIL OF ECONOMIC ADVISERS

TUESDAY, AUGUST 5, 1986

U.S. SENATE,
COMMITTEE ON BANKING, HOUSING, AND URBAN AFFAIRS,
Washington, DC.

The committee met at 10:30 a.m., in room SD-538, Dirksen Senate Office Building, Senator Jake Garn (chairman of the committee) presiding.

Present: Senators Garn, Heinz, D'Amato, Mattingly, Hecht, Proxmire, Dixon, and Sasser.

OPENING STATEMENT OF CHAIRMAN GARN

The CHAIRMAN. The Banking Committee will come to order.

This morning we welcome Dr. H. Robert Heller to the Banking Committee.

Dr. Heller has been nominated to serve on the Board of Governors of the Federal Reserve System for a term running until January 31, 1996.

Dr. Heller brings impressive credentials to this assignment. He currently is a senior vice president and director of international research at the Bank of America. Dr. Heller previously served as Chief of the Financial Studies Division of the International Monetary Fund and has been a professor of economics at both the University of California in Los Angeles and at the University of Hawaii.

Dr. Heller has also published widely in economic journals.

International economic considerations are becoming increasingly important to the implementation of monetary policy just as they are becoming increasingly important to all other areas of the economic decisionmaking.

For this reason, Dr. Heller's background and expertise in international economics will be particularly valuable to the Board of Governors.

Again, I'd like to welcome you here this morning, Dr. Heller, and look forward to learning more about your viewpoints on monetary policy and its relationship to international economics.

Senator D'Amato.

STATEMENT OF SENATOR ALFONSE M. D'AMATO

Senator D'AMATO. Mr. Chairman, I just think we're very fortunate to have someone of Dr. Heller's stature and I'm pleased that he's been nominated for this position. We certainly need him. He will add to the strength of the Reserve Board and its decisions which are so important and I'm delighted to see my good friend, Senator Wilson, who will be presenting Dr. Heller to the committee.

I want to welcome Dr. Mussa to the committee this morning to discuss certain issues that will confront him as a member of the Council of Economic Advisors. Due to the unique role that the Council plays in analyzing the economy and advising the President, Dr. Mussa will have a direct impact on national economic policy and initiatives.

Dr. Mussa will be required to address a wide array of issues not the least of which is the worsening U.S. trade posture. Unless the trade figures are reduced in the second half of this year, the United States will post an unprecedented $170 billion trade deficit by yearend. We cannot afford to allow this trend to continue. Coherent policies must be initiated that will increase U.S. competitiveness in the world marketplace as we work toward balancing our trade account.

Mr. Chairman, Dr. Mussa's academic and professional accomplishments recommend him for the position to which he has been nominated. His expertise in the area of international trade will make him a valuable adviser. I look forward to working with him in the future.

Thank you, Mr. Chairman.

Chairman GARN. Senator Mattingly.

OPENING REMARKS OF SENATOR MATTINGLY

Senator MATTINGLY. Mr. Chairman. I, too, would like to welcome before the committee both Dr. Heller and Dr. Mussa. The positions they will fill are certainly important ones, and will have considerable impact on the performance of our economy and therefore the public policy response by the Congress. I look forward to their statements.

The CHAIRMAN. Senator Hecht.

OPENING REMARKS OF SENATOR HECHT

Senator HECHT. Thank you, Mr. Chairman. I just wanted to hear him personally. It's a very, very important job and you come well recommended and there are very few positions in our Government pertaining to financial institutions and finances all over the world that are as important. So I will be anxious to hear from you.

The CHAIRMAN. Senator Wilson.

STATEMENT OF SENATOR PETE WILSON, U.S. SENATOR FROM THE STATE OF CALIFORNIA.

Senator WILSON. Thank you very much, Mr. Chairman.

I am delighted to have the opportunity to be here today to introduce to you Dr. H. Robert Heller, who has been nominated by

President Reagan to be a member of the Board of Governors of the Federal Reserve System.

Mr. Chairman, as your statement indicates, the significance of this position cannot be exaggerated in these times when strong economic leadership provides the basis for continued economic growth upon which we will depend for prosperity and for strength of all kinds in this Nation.

And as we in the Congress struggle to deal with the fiscal deficit through balanced spending cuts, our efforts are very much dependent on the policies of the Federal Reserve Board.

As responsible growth-enhancing increases in our money supply joined with increased fiscal restraint, not only can our economy grow at a brisker pace but our trade deficit should also shrink measurably.

Mr. Chairman, for those reasons and because of the importance of this responsibility, we are singularly fortunate that Dr. Heller has the experience, the skill, and the training necessary to further these interrelated economic goals.

He has, as you indicated in your capsule statement, both the background and the temperament to deal with the massive economic problems which the Fed must address. For example, not only must the Fed grapple with domestic economic issues, but clearly global ones as well.

In this regard, Dr. Heller brings to the Fed special knowledge and skills that will help us coordinate policies with the central banks of our major trading partners as well as with those of the LDC's, particularly those in this hemisphere.

While Dr. Heller's complete résumé is before the committee, let me highlight just a few of his many accomplishments.

Having gained his doctorate in economics, Dr. Heller also offers to the Fed the benefit of years of academic strength, having taught for 6 years at the University of California at Los Angeles and for 3 years at the University of Hawaii in the fields of money and banking, macroeconomic policy, international trade, and international monetary economics.

In addition, he has taught graduate classes at the Virginia Polytechnic Institute and the University of California at Berkeley and has lectured at universities in Germany and Japan.

Dr. Heller left academia in 1974 to serve as the Chief of the Financial Studies Division of the International Monetary Fund. There he was responsible for the IMF's Research Program in monetary policy and financial markets. The results of this research were published both in academic journals and in IMF publications.

Most recently Dr. Heller has worked in San Francisco as the senior vice president and director of international economic research at the Bank of America. In this position, he directed the institution's international economic research activities involving economic analyses and forecasting of the economies of more than 100 nations.

In addition to Dr. Heller's extensive professional experience, as an expert in the field of economics he's produced varied research reports and books, including "International Monetary Economics," "International Trade and the Economic System."

Certainly Dr. Heller is no stranger to the Congress having appeared before committees on both sides of the Capitol, including this distinguished committee.

And last but not least, I take special pride, Mr. Chairman, as you might imagine, in being able to advise the committee that Dr. Heller, having lived in other parts of the world, is by choice an adoptive Californian. We are very pleased that he and his wife preside in a lovely area of that State called Mill Valley with their two children. I have met his wife. She is here with him. I don't know whether your children are, Dr. Heller, but if so I'm sure the chairman will be pleased to allow you the opportunity to introduce them to the committee.

Mr. Chairman, I obviously share the expressed enthusiasm of Senators D'Amato and Hecht as well as your own for the nominee and would urge the committee to move as quickly as you deliberately can to bring his nomination to the Senate floor so they may confirm him and he may begin on his service as a member of the Federal Reserve Board of Governors.

The CHAIRMAN. Thank you very much, Senator Wilson. We certainly appreciate your willingness to be here in support of Dr. Heller's nomination this morning.

Dr. Heller, before you begin, could I have you stand and be sworn?

[The witness was duly sworn.]

The CHAIRMAN. Do you have an opening statement you wish to make?

Dr. HELLER. Yes, Mr. Chairman. I'd like to make a brief oral statement.

STATEMENT OF DR. H. ROBERT HELLER, NOMINATED TO BE A MEMBER OF THE BOARD OF GOVERNORS, FEDERAL RESERVE SYSTEM

It's a great honor and privilege to appear before this distinguished committee as a nominee to the Board of Governors of the Federal Reserve System. I am particularly grateful to Senator Wilson for introducing me to this committee and I would also like to thank Senators Hecht and D'Amato for their introductory remarks.

The tasks facing the Board of Governors in the discharge of its monetary policy and regulatory and supervisory functions are most challenging these days. Framing appropriate policies is no easy task in the best of times, but in the current period of vast structural changes in the financial sector and the economy at large that task is even more demanding and complicated.

GROWING INTERDEPENDENCE OF WORLD ECONOMY

The ever-growing interdependence between the American economy and the rest of the world adds further complexity to the issues.

If confirmed, I will do my best to support monetary policies that will encourage economic growth and employment within a framework of price stability.

I also look forward to participating in the design and implementation of market-oriented regulatory and supervisory policies that will be supportive of a strong and vigorous financial system.

Thank you very much, Mr. Chairman. I would be happy to answer any questions that you and the other members of the committee might have.

The CHAIRMAN. Thank you, Dr. Heller.

Senator Wilson, I'm sure you have other commitments. We would be happy to excuse you.

Senator WILSON. Thank you very much, Mr. Chairman.

The CHAIRMAN. Dr. Heller, have you and your wife sold all of your bank or bank holding company stock?

Dr. HELLER. Yes, we did, sir.

The CHAIRMAN. Do you hold any options to purchase additional bank or bank holding stock?

Dr. HELLER. Yes, I do hold some options, but these will expire immediately upon my leaving Bank of America.

The CHAIRMAN. So you would not plan to exercise any of those options?

Dr. HELLER. No, sir.

The CHAIRMAN. Would you please explain to the committee your holdings of restricted stock in Bank of America Corp.?

Dr. HELLER. In years past, Bank of America has awarded me a certain amount of restricted stock. These restricted stocks become vested only after a 5-year period. That 5-year period has not passed yet. As a result, the board of directors has exercised its right to repurchase this stock and I will not benefit in any way from these stocks.

The CHAIRMAN. Your SF-278 financial disclosure report shows that you will receive a $25,000 bonus from Bank of America for your services at the corporation up to July 1, 1986, and you will also receive a cashout payment of your vested retirement in 401-K plan funds.

Would this bonus and this cashout payment be payable to you if you left Bank of America at this time for any reason other than service on the Federal Reserve Board?

Dr. HELLER. Yes.

The CHAIRMAN. Will you receive any other payments or funds from Bank of America?

Dr. HELLER. No, none other than the normal benefits of the health-life insurance which will cease shortly after I join the Federal Reserve.

The CHAIRMAN. Aside from your continued participation for a brief period in Bank of America's group life, health, and disability insurance plans to continue these protections for yourself and your family, have you any other continuing arrangement or agreement with Bank of America?

Dr. HELLER. No, sir.

The CHAIRMAN. Is it correct that in order to avoid even an appearance of a conflict of interest you have agreed to recuse yourself for 1 year from participating in any particular matter involving Bank of America or its subsidiary banks that come before the Board of Governors?

Dr. HELLER. Yes, sir.

The CHAIRMAN. While a member of the Board of Governors do you agree to appear before this committee and any other duly constituted committee of the Congress when requested to do so?

Dr. HELLER. Yes, I'd be happy to do so.

The CHAIRMAN. You currently are senior vice president and director of international economic research at Bank of America. Previously, as I stated, you served at the International Monetary Fund as Chief of Financial Studies Division. You obviously have a very strong background in international economics.

LDC'S DEBT PROBLEMS

Of course, this committee has been vitally concerned for several years with the heavily indebted developing countries, the LDC debt problem, and their ability to continue to service their external debt. It's a subject of conversation that we simply can't go more than a few days without discussing.

How do you view the outlook for the LDC's and the implications that the debts have for our banking system? Certainly it has a great effect on Bank of America with the stories that have just appeared in the last few days.

Dr. HELLER. That's right, Senator. I think it's very important to differentiate between the various countries that got into debt service difficulties in the early 1980's. Some of them have made extraordinary progress in resolving their debt service problems that they encountered when interest rates soared to unprecedented highs in the early 1980's, when the industrial countries went into a recession, and when commodity prices started to fall very sharply.

Countries like Brazil have largely overcome their initial difficulties and they are now again enjoying very high and vigorous economic growth.

Other countries have not been so fortunate. Mexico is a good example of that latter group, and Mexico has been very hard hit during the last few months by the continued fall in oil prices.

As a result, I think we are further away from a satisfactory resolution of the debt service problems of countries like Mexico, but I'm confident that with continued strong growth in the industrialized countries, the absence of protectionism against the exports of the developing countries, and with continued help from the international financial institutions like the World Bank, the IMF, as well as the private commercial banks, these countries will eventually be able to overcome their own problems.

But the key to the solution to their problems will necessarily be the implementation of appropriate adjustment policies on their behalf and that is a political decision that these countries have to take themselves.

The CHAIRMAN. What's your view of the willingness of commercial banks to increase their exposure to these already heavily indebted countries, speaking specifically of the Baker plan?

Dr. HELLER. I think most banks recognize that it's a necessity to participate in further increases of loans at the present time. If that necessity wouldn't exist, I think banks would be probably more cautious and in many cases they would be quite happy to reduce their total exposures. But at the present time, there really are no

alternatives but to help these countries to overcome the difficulties that still persist. And what I said about Mexico also applies to several other countries in that category.

The Chairman. It's difficult for me to explain, particularly in Utah, that you continue to loan them more money and that is the answer to their problems. Where does it end? You say it's a necessity right now, but they can't pay their existing debt; we're stretching out loans; we're reducing interest payments; and so it's a little hard for some to understand this necessity that you loan them more money because they can't pay you back what they already owe you.

ESSENTIAL TO PROVIDE ADDITIONAL FINANCIAL RESOURCES

Dr. HELLER. Well, Senator, I think the problems faced by the developing countries are really very similar to the problems faced by many farmers in your own State and in the entire Midwest and in other areas of our country, like Texas and Oklahoma, which are suffering now from the falling oil prices in exactly the same way as countries like Mexico and Indonesia are suffering.

I think it is essential to provide these additional financial resources and just like we have to help our farmers to overcome the difficulties that they're facing now, it is important to help these developing countries to overcome their problems.

The CHAIRMAN. Chairman Volcker appeared before this committee a couple of weeks ago and he emphasized the need for some of our major trading partners to increase the stimulus to their own domestic economies, partly to correct the imbalances we're talking about in international trade and partly to help the developing countries expand their exports.

How important do you think it is that the major industrial countries do increase their domestic growth rates? And, of course, this gets back into the argument we've had over who goes first in reducing their discount rates and we have tried to coordinate with them. We have just made a recent discount rate cut which they have not responded to.

Dr. HELLER. I think in all countries it is desired to have high growth rates, but where countries sometime differ is in their judgment as to what is, first of all, the likelihood of achieving that high growth, and second, what are the other associated costs that would be accompanying such higher economic growth rates.

I think some countries feel that there are different tradeoffs between growth and inflation and similar factors.

But I would agree with Chairman Volcker that countries like Japan and Germany are certainly in the position to open up their markets more and to absorb greater exports from the developing countries in particular and also increase their purchases from the United States. I think it would benefit the consumers in these countries and it would benefit the world economy at large if they would do so.

The CHAIRMAN. Last February the Fed set a 3- to 8-percent target range for growth in the M1 money aggregate for this year. Since the end of last year, M1 has actually been growing at an

annual rate of about 14 percent. M1 velocity has declined at a rate even faster than the postwar record decline in 1985.

How do you explain the rapid growth in M1 which dates from late 1984?

M1 GROWTH RATE

Dr. HELLER. Well, obviously, Mr. Chairman, that's a very complex and broad issue that you're raising here. I think, first of all, there are probably some measurement problems as to what we are really focusing on in the M1 aggregates. I saw a recent survey by the Federal Reserve that could not account for a very large proportion of the currency in circulation. At least it could not be found anywhere in this country. And if you travel around the world, you will see clearly cash drawers full of U.S. dollar bills not only in Europe and Asia but also in Latin America. So much of that money supply, much of that monetary growth that has been taking place in years past, I think has just leaked out of the country into cash drawers around the world because the dollar was considered a very highly desirable currency to hold, not only in this country but also in foreign countries. During the last couple of years I think that has been part of the problem.

There are other measurement problems as far as the movement into NOW accounts and Super NOW accounts is concerned. As interest rates have come down, the interest rates paid on these NOW accounts are now very attractive compared to long-term interest rates or funds that could be invested in instruments that would count only in the broader monetary aggregates, such as time plan accounts, savings accounts, and the like. As a consequence, we have that measurement problem.

You mentioned the money velocity. You were talking about the velocity of circulation of money compared to GNP, but money isn't only used in transactions for GNP. Money is also used in transactions for buying assets in stock markets, bond markets, buying used items, and all these transactions don't count in the current GNP.

As the stock market has boomed, as bond markets have boomed, it is reasonable to expect that some of that transaction money has been used for these purposes, for asset-related transactions.

As a result, the relationship between GNP and money itself is no longer the same as it used to be in years past.

I think all these are factors that account for that change of velocity that we are observing at the present time and that can explain the very high growth rate of M1 while the broader monetary aggregates have grown very nicely within the Federal Reserve specified target ranges.

The CHAIRMAN. Senator Proxmire.

Senator PROXMIRE. Thank you, Mr. Chairman.

Dr. Heller, you have a very interesting background and a very diversified background not only in this country but internationally. You obviously have been an experienced international economist and you've had a chance to study the monetary system in Germany and elsewhere. You were born in Germany, right?

Dr. HELLER. That's right.

Senator PROXMIRE. You have something in common with a great portion of the people who live in my State of Wisconsin. I think we have more people of German ancestry living in our State than any State in the Union.

Earlier this spring the Federal Reserve was concerned that a unilateral reduction in the discount rate by the United States could trigger a run on the dollar unless accompanied by similar reductions by the central banks of our major trading partners.

However, the most recent reduction of the discount rate seems to have been made without reference to what the other central banks were doing. This move has prompted some Fed watchers to conclude that the Fed is now following a go-it-alone policy.

What's your conclusion about whether the Fed is indeed following a go-it-alone policy and do you think such a policy would be appropriate under the present circumstances?

COORDINATED POLICIES WITH KEY TRADING PARTNERS

Dr. HELLER. I would certainly prefer that our policies would be coordinated with our key trading partners, especially Germany and Japan, the countries that you have mentioned, Senator.

However, if those countries are not willing to go along with Federal Reserve policy, I don't feel that our policies should be dictated by the action or inaction of central banks around the world. In other words, the Federal Reserve should decide what is the right monetary policy to be pursued for our own national purposes.

Senator PROXMIRE. Chairman Volcker made it very clear when he testified only a few days ago before this committee that we now live in an international community in which international economics is of the greatest importance. We have to find some way of coordinating international economic policy, particularly among our friends in Europe and Japan—Germany and Japan. It's difficult to do that. I would think maybe with your background you could contribute something to that.

Dr. HELLER. I'd be very happy to do so.

Senator PROXMIRE. Years ago I proposed the Fed set targets for monetary policy and this procedure was adopted. It was objected to by Chairman Burns when I proposed it, but he finally agreed but he established ranges. In other words, instead of saying that we would hit a specific number for M1, M2, M3, he indicated he would only accept it if there could be ranges.

The ranges have gotten so broad they don't have much meaning, in my view. In Germany, as I understand it, they have for each of their monetary aggregates specific numbers.

Why shouldn't we do something of that kind so that we can know whether or not the Federal Reserve is following their guidelines or not?

Dr. HELLER. To hit a precise number is obviously something that is impossible.

Senator PROXMIRE. I wouldn't expect them to hit it on the nose, but when they say it's from 3 to 8 percent it doesn't mean anything. The targets are so broad that it's like hitting the broadside of a barn door by falling against it. You can't miss it.

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Dr. HELLER. Well, whether we can't miss it—I think in the past we have managed to miss it.

Senator PROXMIRE. They've missed that too. You would think they couldn't but they have accomplished that.

Dr. HELLER. As Senator Garn pointed out, there sometimes may also be a good reason to miss it because we've done something else also and that is to specify several different targets—M1, M2, and M3—and sometimes these targets are not totally consistent because of the shifts that are taking place in the public's preferences as far as its own currency and funds holdings are concerned.

So as long as we have a variety of targets I think it is probably reasonable to talk about target ranges and one may well debate on how wide these tolerance ranges should be set.

EXPANSIVE MONETARY POLICY

Senator PROXMIRE. Are you concerned with the rapid increase in the money supply by any measure that we've had over the last 18 months or so. M1 as we all know has even exceeded its enormous range of targets. M2 and M3 are within the targets but the targets are very broad considering the increase in the nominal GNP. And the result is that it seems to me we have an extraordinarily expansive monetary policy. I can't think of a time in our history when our monetary policy as well as our fiscal policy—but especially our monetary policy has been so expansive as it is now.

Dr. HELLER. Well, if you judge it by the monetary target of M1 alone, I think there's reason to——

Senator PROXMIRE. That's not what I'm doing. I'm saying forget about whether it's within the targets or not. The targets themselves permit an increase that's far above a nominal GNP increase that's been fairly modest, 1.1 percent annual rate in the last quarter, very low inflation. So that the amount of credit and money you need in order to finance our gross national product is very moderate but the increase has been great. That's one of the reasons interest rates have been coming down, right?

Dr. HELLER. Well, I would be very careful in arguing that the interest rates have come down because the monetary growth rates have been so high. If you have very high monetary growth rates, sustained over a long period of time, that would undoubtedly rekindle inflationary forces and——

Senator PROXMIRE. I agree with that, but we're talking about over a limited period of time.

Dr. HELLER. That's not a situation that we're in right now, and measured on other indicators as, for instance, commodity prices, real interest rates, inflation-adjusted interest rates, and exchange rates, I wouldn't judge that our monetary policy has been excessively easy overall.

At the same time, you also have a fiscal policy that is becoming more tight and you may well argue that there's reason to countersteer a bit on the monetary policy side as our fiscal deficits are being brought down.

Senator PROXMIRE. I want to ask you a question I'm going to ask Dr. Mussa a little later, Herbert Stein, as you know, is a former Chairman of the Council of Economic Advisers, a highly respected,

topflight economist. He had an article the other day in the Washington Post in which he said that we should not—I almost fell over when I read it from Herb Stein because he's so conservative—that we should not try to cut spending under present circumstances because if we cut spending under present circumstances it could precipitate a recession. It would be a mistake. It was shocking coming from him. I would have accepted it coming from your namesake, Walter Heller or John Kenneth Galbraith or somebody of that kind.

But how can we stimulate the economy if we continue to have a slow rate of growth or move into a recession when we have this very expansive fiscal policy, colossal deficits, and what we agree now, at least for the time being, is an expansive monetary policy? What's left? What do we do?

Dr. HELLER. Well, I think first of all, I would disagree with Professor Stein, with all due respect. I think we have to look beyond the immediate impact in the very short run of cutting Government expenditure. As we are restructuring our whole tax system, as we are making it not only more equitable but also providing a more level playing field, as we are reducing our individual income tax rates, I think you will see that economic growth in the American economy will pick up again, that resources will allocated more efficiently, and that greater economic growth will result.

I think the measures that are being taken right now are necessary measures to set us on a sustained course of economic recovery. To do otherwise, to add to our fiscal deficits, will be a road that will lead to eventually much larger problems than we are facing already right now.

EFFECTS OF TAX REFORM BILL

Senator PROXMIRE. Well, I would agree with you and Stein says the same thing. He just says we're in a dilemma. He doesn't offer any solution, but he says we're in a very, very painful dilemma here and, of course, I can't see any stimulus coming from a neutral change in the tax system. I think it's good. I'm for it. I'm going to vote for it. It's an improvement. As you say, it's more equitable. But I think you could get all kinds of arguments from people who would say that this kind of a revenue neutral tax bill is going to give us much economic stimulus.

It will tend to discourage some savings. It will tend to discourage some business investment. I think it should because there are loopholes involved there and inequities, but to foresee that that tax proposal is going to do much for stimulating our economy I think is really reaching.

Dr. HELLER. I think it won't be a stimulus in the traditional Keynesian sense of providing further Government expenditures and thereby stimulating the economy by increasing aggregate demand.

Senator PROXMIRE. How do you increase aggregate demand if you don't have any change in the overall tax take one way or the other? It's neutral.

Dr. HELLER. I'm saying it will not do that.

Senator PROXMIRE. All right.

Dr. HELLER. It will not do that. I fully agree with you there. But what it will—and I think we agree on this—make the entire playing field more level. By bringing down individual income tax rates, it will reward work efforts more because people will be able to keep a larger share of their marginal dollars that they're earning.

Senator PROXMIRE. Corporations will keep less because corporation taxes are going to increase. Overall, it's a wash.

Dr. HELLER. Well, I agree with you, it's an unfortunate element that the corporate taxes have to go up under current circumstances, and I would guess that you would rather lower the individual income tax rates without having to engage in the necessity of increasing the corporate rates at the present time. That, viewed in isolation, is something that will not enhance growth at the present time.

But if you look at the broader picture of providing a fairer tax system, getting rid of the loopholes, broadening the tax base in that sense, while maintaining low marginal rates, that is the recipe for higher economic growth in years to come.

Senator PROXMIRE. My time is up, Mr. Chairman.

The CHAIRMAN. Senator Dixon.

Senator DIXON. I have no questions for Dr. Heller, but I would like the honor of introducing Dr. Mussa if I may, Mr. Chairman.

The CHAIRMAN. Fine.

Dr. Heller, several proposals have been made in recent years for changing the function and structure of the Fed and they are really all directed, in my opinion, at eroding the independence of the Fed which I have always defended, even when I disagreed with the Fed in the directions they're going, I still feel very strongly that the last thing we want is political interference down there. I would hate to think what the condition of the economy would have been over the years if those in Congress who have been fouling up the fiscal policy of this country had also been determining the monetary policy.

But one of the things that I have been looking at and encouraging the Fed to consider is much quicker release of the minutes of the meeting of the Federal Open Market Committee [FOMC].

What are your views on that proposal?

Dr. HELLER. Well, I understand the debate on that particular issue. As a basic proposition, I am in favor of having more information available rather than less information available.

On the other hand, I understand the arguments to be said in favor of the current practice. The current open market policy directives are frequently phrased in an if-then type of fashion—if economic conditions should change in such and such a manner, then the open market desk should react. In other words, what you're giving the open market desk is a road map of how to navigate in the months to come and you have a lot of conditional statements.

If the minutes would be released right away, I think the open market directives would probably take a different form and it might be necessary to have more frequent meetings of the FOMC so as to guide the open market desk as economic events unfold.

If it should be found advantageous to make those kinds of changes, I think one might well support such an argument. But as

I indicated earlier, I have not heard all the issues and that's clearly something that the Federal Reserve Board has to decide.

PROPOSALS TO CHANGE INDEPENDENCE OF THE FED

The CHAIRMAN. Getting back to proposals for changing the independence of the Fed, one of the most prominent ones is to make the Chairman of the Fed's term coterminus with that of the President. What do you think of that proposal?

Dr. HELLER. I like it as a basic proposition because it would allow the President to pick his own spokesman for the Board of Governors as a whole. I believe that also Chairman Volcker supports that particular change.

The CHAIRMAN. Well, I don't.

I talk about the Congress interfering and I don't necessarily think we ought to have a spokesman for the President down there. As I look at administrations—and not just this one, which I happen to favor—but others, I think the independence of the Fed has been valuable to us.

What's your view of the proposal to reduce the Fed member's term to something less than 14 years in order to give the President an opportunity to make more appointments to the Board?

Dr. HELLER. I think the longer terms really are one of the safeguards that you're talking about—the independence of the Federal Reserve. If you look at the Supreme Court with lifelong appointments, they have the ultimate arrangement that guarantees the independence of the judges sitting on the Court.

The CHAIRMAN. The independence and the arrogance.

Dr. HELLER. But as you shorten the terms, if you would shorten them to very short periods, 2 or 4 years, I think then you would get not only a lack of experience that has served the Federal Reserve I think well in years past, but you would get also the political process much more closely involved.

And if I may come back for one second to your earlier question about the Chairman's term, by making it coterminus you don't give an extra vote to the President who appoints the Chairman. He is the spokesman. He is just the leader of equals. It's still seven votes on the Board at large.

The CHAIRMAN. Well, I agree with you. I don't favor shortening the terms. Your allusion to the Court, I think when you said "ultimate independence," you described it correctly. I think it's too much, far too much there, and I wasn't lightly saying arrogance when I look at how some of our judges with that lifetime security make decisions. But that isn't for our discussion here today to try and resolve the entire court system.

What is your view of the proposals to put a member of the administration, perhaps the Secretary of the Treasury, as he used to be, on the Board?

Dr. HELLER. Well, the Secretary of the Treasury used to be on the Board, as you point out. If you look around the world, I think you will find central banks that have a high degree of independence from the current government. Basically these are the countries where you have low inflation and where monetary policy is conducted in what I would consider a more rational fashion than in

those countries where the central bank is a mere instrument of the finance ministry or the treasury of that particular country. In the extreme, the central bank then turns into just a financing agency of the treasury. That would be clearly detrimental.

The CHAIRMAN. We have also been constantly faced at one time or another with those who believe we should establish seats on the Board—we ought to have a farmer's seat, we ought to have a small businessman's seat, and so on.

Do you favor that kind of proposal?

Dr. HELLER. Well, at the present time we already have a requirement for a certain regional diversification of the Board members. I think if you would overlay another grid on a functional basis you would come down to a quota system where only a small businessman with a farm background from Texas would be able to fill a certain vacancy. Maybe we are overdoing it a bit with further requirements of that sort.

If you look at the Board at the present time, yes, there is an ex-farmer—I think Dr. Angell still is a farmer—on the Board. We have small businessmen. We have a wide variety of backgrounds represented. So I think that in the current selection process these diverse interests are already being represented.

The CHAIRMAN. Governor Angel filled all the quotas—farmer, economist, professor—he took care of several categories.

Senator Heinz.

Senator HEINZ. Mr. Chairman, thank you very much.

Dr. Heller, I gather that Senator Garn discussed with you the issues involving LDC's. Senator Proxmire discussed with you a bit the effects of the tax bill and I apologize for being late. I was down at a leadership meeting at the White House dealing with everything except high interest rates, high real interest rates.

Has the discussion, Mr. Chairman, evolved beyond the discussion of M1 and into the Fed discount rate at this point?

The CHAIRMAN. No.

Senator HEINZ. Well, good. I didn't want to go over plowed ground.

As you know, there's been a great deal of debate, a lot of speeches on the Senate floor and comments in this committee room about whether or not it's appropriate for the Federal Reserve to lower further the discount rate, one of the most sensitive subjects that can ever be discussed. In a sense, you're freer now to discuss it than you will be, assuming you're confirmed. You will not only take a constitutional oath, you in effect will also be taking almost an oath of secrecy unless you are able to prevail on the earlier release of the FOMC minutes, which I understand you did discuss.

As you view the economy today and you take into account the relatively soft economic performance of the Japanese, the West Germans, and the other developed nations, do you think that a further cut in the discount rate would be inflationary?

FURTHER REDUCTION IN INTEREST RATES

Dr. HELLER. At the present time, I think the conditions are set for a further reduction in interest rates at large. If you look at the Gramm-Rudman legislation which will be reducing our Federal

deficits in the years to come, the pressures on real interest rates certainly should come down.

I think in the world economy we also see very few signs that there will be a renewal of inflationary forces in the near future, so I would also expect that nominal interest rates overall would decline.

And in that framework of a declining structure of interest rates overall, I think that there may well be room for further discount rate cuts in the future as well.

Senator HEINZ. Typically, the argument about lower interest rates and the reason they increased inflation is that it was too much money chasing too few goods. What's been remarkable about the last 1½ years of this economic cycle is that whenever you want new goods they're available, not in the United States necessarily, but they are widely available from overseas and at the same prices, in the case of the less developed countries, for the most part than they were 1½ years ago before the Baker plan was announced.

I don't know what I said but I think they concluded that you just made news. It wasn't me. I have never seen that before. You may want a transcript. Let the record show that about 30 seconds ago there was a mass exodus of what I assume were financial reporters of some kind or another. It must have been the other because some are still sitting here.

Do you believe that as long as the United States pursues a free trade policy, as long as LDC's continue to peg their currencies to the dollar as most of them seem determined to do, that it's highly unlikely that inflationary pressures will develop?

Dr. HELLER. I think you mentioned most of the relevant issues there. There's a lot of excess capacity not only in this country as far as our industrial capacity is concerned. Our agricultural output certainly could increase much more without rekindling inflationary pressures. The same holds true for most of the industrialized countries and certainly for the developing world. So we have quite a bit of leeway as far as expansions of output without inflation resurgence is concerned.

Senator HEINZ. During the first 6 months of this year we had virtually zero inflation or less, yet 30-day and 90-day T-bills still commanded an interest rate in the range of somewhere between 6 and 7 percent. That is about as secure an obligation as anyone knows of. That implies very high real interest rates.

What is it going to take to get real interest rates—the difference between the nominal rate and the inflation rate—at least in my terminology—down? Do you consider these a sign of some kind of stress or distress or are we going through some other kind of cycle or period where the returns to capital are for other reasons unusually high and the returns to labor at least in this country relatively low in terms of growth?

Dr. HELLER. Well, in addition, I would stress very much the role of the Federal deficit not only in this country but in countries around the world. That large Federal deficit and the demand for funds in capital markets that is associated with that large Federal deficit, I believe, is responsible to an extent for these high real interest rates.

As we bring down our Federal deficits, these real interest rates should fall.

Senator HEINZ. Well, Dr. Heller, I understand that that's what the book says and yet our deficit as a percentage of GNP has been falling. It's been high. It's been about the same, but as a percentage of GNP it's been falling and maybe you have better statistics than I do, but my impression is there's no shortage of lendable money. There's plenty of availability of credit and there doesn't seem to be a surplus of demand for credit that would create the kind of demand and supply conditions unless—and it would seem to me that in theory you've got to be right—in practice something has happened to the supply and demand equation that has bumped up the real interest rate in a way that puzzles a lot of us.

Dr. HELLER. It is still true that we are pulling in very large amounts of foreign funds on a net basis, into our country, and I think that's another indication of the great financing needs that we have at the present time.

I agree that there are also other factors, like uncertainty in financial markets and nobody knows exactly what's happening with tax legislation. These factors may contribute to a higher level of real interest rates because people are asking for an uncertainty premium in addition.

Senator HEINZ. Is there anything we can do about that uncertainty premium besides ratchet down the budget dificit? Is our trade deficit an element there? Is world debt an element there as well?

Dr. HELLER. I would say the trade deficit is to a large extent also reflective of the large budget deficit that we have in our country because the aggregate demand for goods and services, including the Federal demand for goods and services, just spills over into the foreign sector and thereby pulls in these imports.

So the solution to the trade imbalance will also lie to quite an extent in the elimination of the Federal deficit.

Senator HEINZ. If we can't do a better job of reducing spending, should we increase taxes?

Dr. HELLER. I would do that only as a very, very last resort.

TAX BILL MAY CUT INTEREST RATES

Senator HEINZ. You mentioned the tax bill. My last question has to do with the tax bill and one of the predictions regarding at least, the Senate tax bill. We don't know what's going to happen in the House-Senate conference—probably nothing good. We'll have to compromise with the House on some things we shouldn't. The Senate tax bill, because of the lower tax rates, both average and marginal, and because of the elimination of certain deductions such as the consumer interest deduction, is estimated to reduce interest rates by some economists.

Do you agree with that?

Dr. HELLER. Yes.

Senator HEINZ. By the same token, because of the shift of tax burden in the case of the Senate bill—roughly $100 billion over 5 years to business to corporate America—it is also believed that the

bill will result in more consumer spending. There will be less tax burdens on consumers and more on business.

Would you agree with that?

Dr. HELLER. Well, clearly there's a greater tax burden on business as a result of the bill. I think nobody would differ with that. You mentioned the figure of $100 billion which is the current estimate.

Senator HEINZ. Will that $100 billion in funds that are made available to consumers—they will have more to spend—will that go principally into consumption or into savings?

Dr. HELLER. Well, it will be split. Principally, it will go into consumption. Over a longer period of time, one has as a rule of thumb that approximately three-fourths of it will go into consumption.

Senator HEINZ. If the tax bill not only lowers the cost of capital, which presumably a reduction in interest rates is an important element to bring about, but at the same time it also makes the kind of changes in tilting more toward consumption and away from investment, do we come out ahead or behind or can't we tell?

Dr. HELLER. Well, overall, I think we will come out ahead because, first of all, the consumption effect that you talked about earlier will bring forth more production of goods and services.

Senator HEINZ. It might bring in more imports. A few minutes ago you said the fiscal stimulus stimulates imports. If the tax bill results in consumer stimulus, why won't that mean more imports?

Dr. HELLER. I think it will be associated with more imports too. All the more important it is to eliminate the Federal deficit because then you get the macroeconomic equation right again so that you don't have that excess of spending. But I agree with you that some of these additional consumption goods will be bought abroad. There's every reason to expect that.

Senator HEINZ. Dr. Heller, thank you very much for your answers.

Dr. HELLER. Thank you, sir.

The CHAIRMAN. Dr. Heller, if we could go out of order just for a moment, Senator Dixon has to leave and would like the opportunity to introduce Dr. Mussa and so we'll do that. You don't need to leave and he doesn't need to come up. We'll just make sure that the recorder places Senator Dixon's introduction in the proper place when we start the next hearing. Senator Dixon.

REMARKS OF SENATOR DIXON

Senator DIXON. Thank you, Mr. Chairman. I thank you and the ranking member for letting me impose for a moment to introduce Dr. Michael Mussa, who is a distinguished Illinoisian. He's a product of one of the truly premiere educational institutions in our country, the University of Chicago. He was educated there and he now teaches at the university, and while I do not know Professor Mussa personally, I am told that he is an economist of real distinction.

He currently holds the Abbott professorship at the University of Chicago and he received the Prix Mondial Nessim Habif from the University of Geneva for his research in international economics,

and I recommend him highly to the committee, Mr. Chairman. I thank you for the time.

The CHAIRMAN. I thank the Senator from Illinois.

Senator Proxmire.

Senator PROXMIRE. Thank you, Mr. Chairman.

I was seeing if I can think of a question that will empty the press table on the left. The people on this side are a little more stable I guess. [Laughter.]

I just have a couple of questions because I know Dr. Mussa has been waiting very patiently.

Isn't the answer to Senator Heinz on why interest rates are high comparatively, is that they're high because lenders are smart enough to see that our fiscal and monetary policy—and there's a lag involved certainly in monetary policy—Mr. Friedman has demonstrated that very well—will lead to future inflation, perhaps very great inflation, so lenders demand an inflation premium to compensate for the expected inflation in the future?

Dr. HELLER. I believe your statement is entirely correct for medium- and long-term interest rates. However, it would not explain the high-interest rates on short-term instruments.

Senator PROXMIRE. Well, isn't the answer there that these interest rates are interdependent to a considerable extent and the higher rates on long- and medium-term have an influence on short-term interest rates?

Dr. HELLER. Yes, as far as the inflation premium is concerned, you may well have lower short-term interest rates. In other words, you would get a steeper yield curve if you would expect that inflation would pick up very rapidly.

At the present time, we have a yield curve that is rather flat as far as the overall profile is concerned. To me, that would indicate no great change in the inflation rate expectation over the time period covered.

REVIEW OF FED DECISIONS IN LAST 10 YEARS

Senator PROXMIRE. Now as you look back over the conduct of monetary policy during the last 10 years, there must have been occasions when you disagreed strongly with actions taken by the Fed.

Can you outline for the committee the two or three major mistakes made by the Fed where you would have argued for a different course had you been a Federal Reserve Board Governor?

Dr. HELLER. Well, I think that's a very, very difficult question for me to answer because whatever I say or don't say may lead to some major mistakes on my behalf. In other words, when I walk out of here I may say, well, that's really an instance where I would have disagreed with the Federal Reserve or not.

Senator HEINZ. Senator Proxmire, are you trying to get the rest of the people of the press to leave? [Laughter.]

Senator PROXMIRE. Well, I'm trying.

Dr. HELLER. I don't know. I honestly don't know how to answer that question in such a broad framework.

Senator PROXMIRE. Well, I don't ask you to criticize any particular member of the Federal Reserve Board or anything like that, but I would just like to get a sharper delineation of your philoso-

phy and your view. I think all of us may support or criticize the Fed for one thing or another. It's not a question designed to get you in any difficulty and I know you're smart enough you won't get into any difficulty.

Dr. HELLER. Well, there were times where maybe the policy could have been a bit more steady, if you want to call it that way. In the early 1980's, interest rates had enormous volatility, in 1980–81, in that period in particular. If the Federal Reserve maybe had been a bit more steady—and the Federal Reserve is not the only agency influencing the level of interest rates—I think it would have served the country better.

Senator PROXMIRE. Was the depth and duration of the 1982 recession caused in part by the Federal Reserve policy that was too tight under the circumstances?

Dr. HELLER. Well, too tight or not too tight—I think that's a very tough question to answer again. Clearly, the Federal Reserve had to stop the inflationary climate that we had gotten into in the 1970's. It is, I think, fairly easy to be a Monday-morning quarterback and to say, well, if the monetary growth process would have been slowed down over a period of 5 years instead of over a period of 3 years, then the recession would not have been as severe as it actually turned out to be.

I think at the time that the decisions were made the Federal Reserve probably did the best that could have been done.

Senator PROXMIRE. Now you're taking the place of Preston Martin I understand and your California background is very strong. You got your doctorate at the University of California at Berkeley in 1965. You were associate professor of economics at UCLA in Los Angeles from 1965 to 1971. From 1978 until the present you've been a senior vice president and director of international economics at the Bank of America in San Francisco. Is that right?

Dr. HELLER. Yes, sir.

BANK OF AMERICA'S $640 MILLION LOSS

Senator PROXMIRE. Now, on July 17, the New York Times carried an article about Bank of America's $640 million loss in the second quarter of this year. That loss is the second largest ever for an American bank, following the $1.16 billion loss by Continental Illinois in the second quarter of 1984. It comes on top of other major losses by Bank of America in recent years.

My understanding is that one reason that Bank of America has been able to deal with these problems is because it was forced by regulators in recent years to better its capital position.

In May 1983, in testimony before the House, you mentioned your own reservations about forcing banks to increase their capital.

In retrospect, do you now favor that emphasis even if foreign bank regulators permit their banks to operate with less capital?

Dr. HELLER. Higher capital provides a certain cushion, a margin of safety, for the depositors of the institution. In that sense, banks that are highly capitalized clearly provide a greater margin of safety and, as a result, these banks also benefit from having more favorable ratings from the rating agencies and therefore are able

to raise funds at lesser costs than banks that are not so highly capitalized.

I think it's very difficult for a bank in a time of higher loan losses to raise capital at that particular time as well. If you have a higher capital cushion to start out with, clearly you are in a better position to weather difficult economic conditions in the future. But if you are forced to increase capital at a time when you are already in difficulty, I think you are putting a lot of stress on that particular institution.

Senator PROXMIRE. Well, of course, you are, but isn't that one of the disciplines that the regulators are in business to do? You will be a bank regulator as well as a monetary policy expert and you will determine monetary policy along with the other Governors, but you're also a regulator. Don't the regulators—under these circumstances—have a duty to force banks to do some things that are unpleasant that they won't do themselves? It's hard for them to do it, but if they don't do it the banks will be in trouble.

Your bank, Bank of America, is in trouble.

Dr. HELLER. Well, we may differ on that, but we would certainly be happier if profits were higher.

As far as the regulatory question is concerned, what I'm saying is that the regulators should not change course at a time when there are already great stresses on these financial institutions. If the regulators had had the foresight to ask for these higher capital requirements in the first instance, the banks would have been clearly better placed to live through these difficult times that they were encountering.

I think there's a second question. I think that's what I really stressed in that earlier testimony, that many banks in other countries have much lower capital ratios. Overall, the Japanese banks, for instance, have roughly half the capital ratios that we have in this country.

Now, with these lower capital ratios, they have credit ratings that are, on average, better than the credit ratings of American institutions. The Japanese banks are also operating branches and subsidiaries in this country, and what I'm calling for is a bit more of a level playing field not only domestically but also internationally.

Senator PROXMIRE. Well, that may be, but I don't see any conflict between a more conservative banking operation plus a capital ratio of the kind that Arthur Burns, who we all respect greatly, recommended of about 7 percent. It's a lot less than that now. Many of these banks have capital ratios around 3 or 4 percent, as you know, especially the big banks, and, as you say, the foreign banks have even lower capital ratios, but they have apparently more conservative policies judged by their results.

Dr. HELLER. Well, Bank of America, I'm happy to say, has a capital ratio of approximately 6 percent, so it's close to the Burns standard that you are advocating.

Senator PROXMIRE. Well, it's close to it but it's below it.

Dr. HELLER. Yes.

Senator PROXMIRE. That was a minimum of 7 percent.

RISK OF DEFAULTS ON BANKING SYSTEM

In May 1981 you testified before the Foreign Relations Committee on the debt servicing capacities of developing countries. You said then:

> The international portfolio of commercial banks is rather well diversified and the risk that default by any one country would materially affect the health of the international banking system is therefore rather remote.

Do you still believe that? If Mexico defaulted, what would be the impact on the Bank of America and on the banking system as a whole?

Dr. HELLER. Well, an outright default of Mexico would clearly not be a pleasant experience for any major bank around the world. Given the exposure of the large American banks, including Bank of America, it would be a very difficult pill to swallow at the present time.

I think we have portfolio diversification, for instance, between loans to Brazil and to Mexico. I think overall it has been true that this diversification has clearly helped the banks to weather the very severe international difficulties that we encountered.

As you recall, in the early days of the debt crisis, Mexico was improving its conditions rather rapidly. I'm talking about the period in 1983, early 1984, when oil prices were still very high; while Brazil was struggling. Since then we have seen a reversal of the fortunes of these two countries, that was not entirely unrelated to the oil prices. So the diversification that I was talking about really has helped us to live with the difficulties in the international financial world.

Senator PROXMIRE. But apparently you would modify, then, your statement of May 1981 where you said the international portfolio of commercial banks is rather well diversified and the risk that default by any one country would materially affect the health of the international banking system is rather remote.

You would agree that if Mexico, for example, defaulted, there would be considerable problems?

Dr. HELLER. Yes; there would be considerable problems. I think I was talking about the average country rather than the biggest ones as far as total international debt is concerned, Mexico and Brazil being them.

Senator PROXMIRE. Thank you very much.

The CHAIRMAN. Thanks very much, Dr. Heller. We have no additional questions for you at this time. There may be some from members who were not able to be here this morning who would like you to respond in writing, but we will move forward with your confirmation process as rapidly as we can. Thank you very much.

Dr. HELLER. Thank you, Mr. Chairman.

[Response to written questions of Senator Gorton and biographical sketch of nominee follow:]

RESPONSE TO WRITTEN QUESTIONS OF SENATOR GORTON FROM
H. ROBERT HELLER

Question 1. Given the current economic conditions of slowing growth, contractionary fiscal policy, falling interest rates, and a trade deficit that reaches new records regularly, what tools are available to the U.S. government to stimulate growth? Or are we heavily dependent upon other economies at this point?

Answer: High economic growth in the key industrial countries would undoubtedly help to increase our exports and thereby our economic growth, with particularly beneficial effects on those of our industries that have been affected by a loss of export markets. However, exports account for only 9 percent of U.S. GNP and even a high percentage rate of growth in that sector would contribute only a relatively small boost to overall U.S. GNP.

The U.S. Government can help to sustain economic growth in this country by reducing the Federal deficit through spending cuts and by implementing swiftly the proposed tax reforms. The short-term contractionary effects of the fiscal policy may well be limited as private spending is stimulated by the lower interest rates and greater availability of credit that would result from the lower deficit, and, if necessary, could be counterbalanced by a more accommodative monetary policy. Eventually the tax cuts and the tax reform will result in a more acceptable sharing of the tax burden and a reduction of distortions in resource allocation patterns. As loopholes and special tax incentives are reduced or eliminated, investors will respond by allocating investment funds on the basis of economic incentives and not just tax incentives. This improvement in resource allocation, in conjunction with the lower marginal tax rates, should improve the climate for sustained economic growth in this country.

Question 2. Given that the Germans and the Japanese are reluctant to stimulate their domestic economies, what course should the U.S. follow to stimulate domestic economic growth?

Answer: I have answered this question largely in the context of Question No. 1. To repeat, the key to achieving sustained economic growth in the United States is the swift implementation of tax reform and the deficit reduction program. During that period monetary policy should be accommodative if needed to sustain U.S. expansion.

Question 3. Would you say that it has been possible to lower the discount rate for the third time this year because of Congressional efforts to curb federal budget deficits or because of slowing economic growth?

Answer: Both the Federal deficit reduction program and the slowing economic growth have helped to reduce interest rates since late last year. In addition, the decline in inflation and in inflation expectations also have contributed in a major way to bringing about lower rates. It is difficult to disentangle the effects of these various influences, although the proposed Federal budget cuts probably had their impact mainly on expectations and therefore on medium and long-term interest rates. Within that framework of falling interest rates and subdued economic expansion, it was possible to lower the discount rate as well.

Question 4. Some private and many government forecasters are predicting a rise in the rate of growth to as high as 4% in 1987. What factors will contribute to this rise?

Answer: The fall in interest rates and the ample monetary growth that has taken place should be key factors in stimulating the domestic economy. A further factor is the fall in the exchange rate. I would expect that the fall in the external value of the U.S. dollar will have a reasonably strong

effect on the import competing sector in this country. By providing a more level playing field for domestic and foreign producers, it should be possible for domestic corporations to compete more effectively against their foreign counterparts.

I do not anticipate a rapid increase in U.S. exports because foreign growth rates are rather modest and the demand for U.S. products should therefore increase only slowly. It will be difficult for U.S. producers to compete in the markets of Japan and Western Europe as domestic producers in these countries offer stiff competition to American exporters. It should also be borne in mind that Third World markets in Latin America, the Middle East and Africa are largely depressed and that export prospects for these traditional markets of American producers are therefore not very bright.

Question 5. What factors should be taken into account in setting monetary policy?

Answer: I believe that a broad range of factors should be taken into account in determining monetary policy. In addition to the traditional monetary aggregates, one should consider economic conditions in the country at large, as evidenced by capacity utilization rates, employment and unemployment rates, and the like. A second group of factors relates to the price performance in commodity and asset markets as well as the markets for goods and services. Third, interest rates, and in particular real interest rates, have to be paid much attention. A fourth group of factors that should be increasingly taken into account relates to the external sector. Exchange rates and our trade performance are among the important indicators in this area.

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GORTON--HELLER

Question 6. Can we expect to see upward pressure on inflation as a result of the fall in the value of the dollar? If so, when? If not, why not?

Answer: I would not expect that major upward pressure on inflation would result as a consequence of the fall in the price of the dollar experienced so far. World market prices have been rather stable in terms of U.S. dollars, and consequently little or no inflationary stimulus has emanated from that source. I would view the current change in the exchange rate of the dollar versus the key currencies of Japan and Western Europe mainly as an appreciation of their currencies rather than a depreciation of the U.S. dollar. The difference lies in the stable price performance of the American currency at the present time.

So far foreign producers have been able to absorb much of the appreciation of their own currencies through a reduction in the rather ample profit margins that they enjoyed in the recent past. Consequently, they did not have to increase U.S. dollar prices or have done so only by modest amounts. This has contributed to the stable price performance of the American economy. A further marked drop in the dollar, however, would probably put much greater pressures on those producers to increase prices, and might, therefore, tend to have a more pronounced impact on domestic U.S. prices.

Question 7. Are there any factors on the horizon that may reignite inflation?

Answer: There are no indications that inflation will increase rapidly in the immediate future. We should expect a modest pickup in the measured inflation rate once the beneficial effects of the oil price increases have been fully passed through, but I would expect overall price pressures to remain quite moderate.

Question 8. Suppose that inflation does rise again sometime during the Gramm-Rudman-Hollings deficit reduction period. What type of policy should the Fed pursue as Congress continues to reduce deficits?

Should Congress pursue a less contractionary course if the Fed was to restrict money growth under such circumstances?

Answer: If there should be an increase in inflation in the coming years, the Federal Reserve should take that into account, along with the other factors mentioned in the answers to Question 5, in determining future monetary policy.

I do not believe that Congress should waver in its deficit reduction program to offset a temporary restriction in the growth of the monetary aggregates under such circumstances. It would be very difficult to fine tune fiscal policy to respond to temporary changes in monetary growth, and such an action should not deflect Congress from the overriding goal of restoring fiscal discipline.

Question 9. Do you believe that proposals to permit bank holding companies to underwrite municipal revenue bonds, commercial paper, or mortgage-backed securities threaten the safety and soundness of our banking system? Do they enhance it?

Answer: I believe that it is perfectly reasonable for commercial banks to underwrite municipal revenue bonds, commercial paper or mortgage-backed securities. These are activities clearly related to banking activities now performed by commercial banks and would help to enhance the earnings and competitiveness of the banking system. I would judge that the risks associated with these activities are no different from the risks incurred by banks in their other activities. By offering another source of banking earnings, the product differentiation will help to enhance the stability of the earnings base of the banking system.

STATEMENT FOR COMPLETION BY PRESIDENTIAL NOMINEES

Name: HELLER (LAST) H(einz) (FIRST) Robert (OTHER)

Position to which nominated: GOVERNOR, FEDERAL RESERVE SYST. Date of nomination: 7-21-86

Date of birth: 8 - 1 - 40 (DAY) (MONTH) (YEAR) Place of birth: COLOGNE, GERMANY

Marital status: MARRIED Full name of spouse: EMILY EILEEN HELLER

Name and ages of children: KIMBERLY, 11
CHRISTOPHER, 8

Education:

Institution	Dates attended	Degrees received	Dates of degrees
PARSONS COLLEGE FAIRFIELD, IOWA	9/60 - 8/61	B.A.	8/61
UNIV. OF MINNESOTA MINNEAPOLIS, MINN	9/61 - 6/62	M.A.	6/62
UNIV. OF CALIFORNIA BERKELEY, CALIF.	9/62 - 6/65	Ph.D.	6/65

Honors and awards: List below all scholarships, fellowships, honorary degrees, military medals, honorary society memberships, and any other special recognitions for outstanding service or achievement.

OMICRON DELTA EPSILON, ECONOMICS HONOR SOCIETY
NATO FELLOW
ASSOC. STUDENTS, UCLA, OUTSTANDING TEACHING AWARD
ASSOC. STUDENTS, UCLA, OUTSTANDING SERVICE AWARD

Memberships: List below all memberships and offices held in professional, fraternal, business, scholarly, civic, charitable and other organizations.

Organization	Office held (if any)	Dates
WESTERN ECONOMIC ASS'N.	EXEC. COMMITTEE	1967 - PRESENT
AMERICAN ECONOMIC ASS'N.		1963 - PRESENT
ROYAL ECONOMIC SOCIETY		1965 - PRESENT
CALIFORNIA YACHT CLUB		1965 - 71
SAN FRANCISCO YACHT CLUB		1979 - PRESENT
BANKERS CLUB (SAN FRANCISCO)		1979 - PRESENT
TIBURON PENINSULA CLUB		1982 - PRESENT

Employment record: List below all positions held since college, including the title or description of job, name of employment, location of work, and dates of inclusive employment.

1965-71 ASST., ASSOC. PROF OF ECONOMICS, UCLA, LOS ANGELES, CA.
1971-74 PROFESSOR OF ECON (& ACTING CHAIRMAN), UNIV OF HAWAII, HONOLULU, H.
1974-78 CHIEF, FINANCIAL STUDIES DIVISION,
INTERNATIONAL MONETARY FUND, WASHINGTON, DC
1978-PRESENT. SENIOR VICE PRESIDENT AND DIRECTOR OF
INT'L ECON., BANK OF AMERICA, SAN FRANCISCO, CA.

Government experience: List any experience in or direct association with Federal, State, or local governments, including any advisory, consultative, honorary or other part-time service or positions.

NONE

Published writings: List the titles, publishers and dates of books, articles, reports or other published materials you have written.

ATTACHED LIST

Political affiliations and activities: List all memberships and offices held in and services rendered to all political parties or election committees during the last 10 years.

CALIFORNIA REPUBLICAN PARTY

3

Political contributions: Itemize all political contributions of $500 or more to any individual, campaign organization, political party, political action committee or similar entity during the last eight years and identify the specific amounts, dates, and names of the recipients.

NONE

Qualifications: State fully your qualifications to serve in the position to which you have been named. (attach sheet)

ATTACHED

Future employment relationships:

1. Indicate whether you will sever all connections with your present employer, business firm, association or organization if you are confirmed by the Senate.

YES

2. As far as can be foreseen, state whether you have any plans after completing government service to resume employment, affiliation or practice with your previous employer, business firm, association or organization.

NO

3. Has anybody made you a commitment to a job after you leave government?

NO

4. Do you expect to serve the full term for which you have been appointed?

YES

Potential conflicts of interest:

1. Describe any financial arrangements or deferred compensation agreements or other continuing dealings with business associates, clients or customers who will be affected by policies which you will influence in the position to which you have been nominated.

NONE. ALL FINANCIAL CONNECTIONS (SUCH AS PENSION PLAN DISBURSEMENTS) WILL BE SEVERED WITHIN 90 DAYS OF CONFIRMATION.

2. List any investments, obligations, liabilities, or other relationships which might involve potential conflicts of interest with the position to which you have been nominated.

NONE

3. Describe any business relationship, dealing or financial transaction (other than tax-paying) which you have had during the last 10 years with the Federal Government, whether for yourself, on behalf of a client, or acting as an agent, that might in any way constitute or result in a possible conflict of interest with the position to which you have been nominated.

NONE

4. List any lobbying activity during the past 10 years in which you have engaged for the purpose of directly or indirectly influencing the passage, defeat or modification of any legislation at the national level of government or affecting the administration and execution of national law or public policy.

NONE OTHER THAN THE CONGRESSIONAL TESTIMONIES LISTED IN THE ATTACHMENT.

5. Explain how you will resolve any potential conflict of interest that may be disclosed by your responses to the above items.

ALL CONNECTIONS (PENSION PLAN) WITH PRESENT EMPLOYER WILL BE SEVERED WITHIN 90 DAYS OF CONFIRMATION.

Civil, criminal and investigatory actions:

1. Give the full details of any civil or criminal proceeding in which you were a defendant or any inquiry or investigation by a Federal, State, or local agency in which you were the subject of the inquiry or investigation.

I WAS NAMED AS A DEFENDANT IN A SUIT BY CREDITORS OF A REAL ESTATE PARTNERSHIP. SUIT WAS DISMISSED AT REQUEST OF PLAINTIFF. PARTNERSHIP IS BEING DISSOLVED ACCORDING TO STATEMENT BY GENERAL PARTNER.

2. Give the full details of any proceeding, inquiry or investigation by any professional association including any bar association in which you were the subject of the proceeding, inquiry or investigation.

NONE

H. Robert Heller

Statement of Qualifications to Serve as Member of the Board of Governors of the Federal Reserve System

I believe that I am qualified to serve as a member of the Board of Governors of the Federal Reserve System because of my academic experience, service with an international governmental institution, work experience as bank executive, extensive publishing activity, and previous relations with Congress. A complete biography is attached.

Academic Qualifications

After receiving my Ph.D. degree in economics from the University of California at Berkeley in 1965, I taught for 6 years at the University of California in Los Angeles and for 3 years at the University of Hawaii. My teaching activities focused on money and banking, macro-economic policy, international trade, and international monetary economics. At both institutions I was granted tenure through a faculty peer review process.

After leaving full-time academic employment in 1974, I continued to teach graduate economics and business courses at Virginia Polytechnic Institute (Reston Graduate Program) and the Graduate School of Business of the University of California at Berkeley.

I have lectured at a large number of universities in the United States, Germany, and Japan and participated in numerous national and international academic, business, and governmental conferences.

International Organizations

I served with the International Monetary Fund for 4 years, beginning in 1974. As Chief of the Financial Studies Division, I was responsible for conducting and supervising the IMF's research program in monetary policy and financial markets. The results of that research were published in academic journals, IMF publications, and internal documents.

As a staff member of the IMF, I participated in a wide variety of intergovernmental consultations and negotiations at the highest levels. I assisted in the drafting of speeches, policy statements, and the Annual Report. I also helped to organize international conferences and meetings.

Commercial Banking

As Senior Vice President and Director of International Economic Research at Bank of America, I have supervised the international economic research activities of the bank since 1978. This has involved economic and financial analysis and forecasting for more than 100 countries.

I also participated extensively in senior management committees. In addition, I gave numerous speeches to bank customers and the public about economic and financial issues and had frequent contacts with the media.

Publishing Activity

I have published extensively throughout my professional career. I have written 5 books, including International Monetary Economics, International Trade, and The Economic System. My books have been translated into 5 foreign languages. I have also edited books for the International Monetary Fund.

I have written numerous articles for publications ranging from the American Economic Review to the Wall Street Journal. In addition, I have served on the editorial boards of several scholarly journals.

Congressional Testimony

I have testified on 14 occasions before Congressional Committees, including the Joint Economic Committee; the Senate Subcommittees on International Finance and Monetary Policy; International Economic Policy; and East Asian and Pacific Affairs; as well as the House Subcommittees on Domestic Monetary Policy; International Trade, Investment, and Monetary Policy; and Financial Institutions, Supervision, Regulation, and Insurance.

July 21, 1986

BIOGRAPHICAL SKETCH 4/86

H. ROBERT HELLER
Senior Vice President and Director
International Economic Research
Bank of America NT&SA
San Francisco, California 94137
(415) 622-2076

Robert Heller is Senior Vice President and Director of International Economic Research at Bank of America. An internationally renowned expert on monetary and trade issues, he serves as the bank's chief international economic spokesman.

Prior to joining Bank of America, he was Chief of the Financial Studies Division of the International Monetary Fund, where he was in charge of the IMF's financial research program.

He also teaches financial management in the Graduate School of Business Administration, University of California at Berkeley, the same institution where he received his doctorate. A former professor at UCLA and the University of Hawaii, he has lectured at universities and business conferences all over the world.

He has testified numerous times before committees of the U.S. Congress and has served as a consultant to NATO. In addition, he has published five books and numerous articles on international trade and finance.

H. ROBERT HELLER
Economics-Policy Research Department (3015)
Bank of America
San Francisco, California 94137
(415) 622-2070

PERSONAL:

Birthdate: January 8, 1940
U.S. Citizen
Social Security Number: 485-52-9879
Married to Emily Mitchell (1970)
Children: Kimberly (1974), Christopher (1977)

EDUCATION:

1965	Ph.D., University of California, Berkeley
1962	M.A., University of Minnesota, Minneapolis

APPOINTMENTS:

1978-Present	Senior Vice President and Director, International Economic Research Bank of America, San Francisco
1974-1978	Chief, Financial Studies Division, International Monetary Fund, Washington, D.C.
1971-1974	Professor of Economics, University of Hawaii, Honolulu
1965-1971	Assistant and Associate Professor of Economics, University of California, Los Angeles
1965	Instructor, University of California, Berkeley

TEMPORARY AND ADMINISTRATIVE APPOINTMENTS:

1982-Present	Lecturer, Graduate School of Business Administration, University of California, Berkeley
1982-1983	Co-Director, International Banking Seminar, Alpbach, Austria
1975-78	Adjunct Professor, Virginia Tech and State University, Graduate Center Reston, Virginia
1973-1974	Chairman, Department of Economics, University of Hawaii
1972-1973	Graduate Chairman, Department of Economics, University of Hawaii
1971	Director, National Science Foundation, Institute for Economics Instructors, University of California, Los Angeles
1970	Gastprofessor, Universitat Gottingen, Germany
1970	Gastprofessor, Universitat des Saarlandes, Saarbrucken, Germany
1969	Visiting Associate Professor, University of Hawaii

AWARDS AND PROFESSIONAL ACTIVITIES:

1985-Present	Editorial Board, International Trade Journal
1985-Present	Advisory Committee, International Affairs Program, Golden Gate University, San Francisco
1984-Present	International Advisory Board, Bank Administration Institute
1984-Present	Economic Advisory Committee, Institute of International Finance, Washington, D.C.
1984	Advisory Board, Institute on International Finance, Southern Methodist University, Dallas, Texas
1983-Present	Trustee, Institute for International Trade, Berkeley, California
1982	Member, Wisemen Group on Korean Economy
1979-Present	Committee on International Monetary Affairs, U.S. Council on International Business, New York, N.Y.
1977-1981	Executive Committee, Western Economic Association
1975-1983	Associate Editor, Journal of Money, Credit, and Banking
1973-1974	NATO Fellow
1970	Exchange Visitor, German Research Foundation
1970	Exchange Visitor, Nagoya City University, Nagoya, Japan
1968-1969	Distinguished Service Award, Associated Students, UCLA
1967	Distinguished Teaching Award, Associated Students, UCLA
1965-1969	Ford Foundation Grants

Major Bank of America Committees

1982-Present	Trust and Fiduciary Policy Committee
1980-Present	Country Evaluation Advisory Committee
1978-Present	Foreign Currency Outlook Committee (Chairman since 1983)

1978-1983	International Money Policy Committee
1978-1980	Country Risk Rating Committee (Chairman)
1978-1980	Policy Research Council

PUBLICATIONS:

Books

International Trade: Theory and Empirical Evidence, Prentice Hall, Englewood Cliffs, N.J., First edition 1968, Second edition 1973; Japanese edition 1970 and 1984, Portuguese edition 1970, Taiwan edition 1974, German edition 1975, Malaysian edition 1983, Spanish edition 1983.

International Monetary Economics, Prentice Hall, Englewood Cliffs, N.J. 1974; Taiwan edition 1978, Spanisn edition 1978, Japanese edition 1979, Malaysian edition 1983.

The Economic System, The Macmillan Co., New York, N.Y., 1972; Portuguese edition 1977.

Japanese Investment in the United States (with Emily Heller), Praeger Publishers, New York 1974.

The Economic and Social Impact of Foreign Investment in Hawaii (with Emily Heller), Economic Research Center, Honolulu, Hawaii 1973. Japanese edition published in Economic Society Policy, April and May, 1974. Also published by Hawaii International Services Agency, State of Hawaii, 1974.

Books produced for the International Monetary Fund

The Monetary Approach to the Balance of Payments, 1977.

The New International Monetary System, R.A. Mundell and J.J. Polak, eds. Columbia University Press, 1977.

Essays in Economic Policy by J. Marcus Fleming Columbia University Press, 1978.

Congressional Testimony

"Japanese Investment in Hawaii," Impact of Foreign Investment in the United States, Hearings before the Subcommittee on Foreign Commerce and Tourism of the Committee on Commerce, U.S. Senate, December 27, 1973.

"The Eurocurrency Market Control Act of 1979," Statement before the Subcommittees on Domestic Monetary Policy and on International Trade, Investment, and Monetary Policy of the Committee on Banking, Finance, and Urban Affairs of the U.S. House of Representatives, June 27, 1979.

"The Proposed Redefinition of the U.S. Monetary Aggregates," Measuring the Monetary Aggregates, Subcommittee on Domestic Monetary Policy of the Committee on Banking, Finance, and Urban Affairs, February, 1980.

"International Commercial Bank Lending and Desirability of an IMF Quota Increase," Statement before the Subcommittee on International Trade, Investment and Monetary Policy of the Committee on Banking, Finance, and Urban Affairs, House of Representatives, April 21, 1980.

"The Export Trading Company Act of 1980," Statement before the U.S. House of Representatives Subcommittee on Financial Institutions, Supervision, Regulation and Insurance of the Committee on Banking, Finance and Urban Affairs, Washington, D.C., September 30, 1980.

"The Debt-Servicing Capacity of Developing Countries," Statement at the Hearings on "The U.S. Stake in the Global Economy." U.S. Senate Subcommittee on International Economic Policy, Committee on Foreign Relations, Washington, D.C., February 25, 1981.

"The IMF Quota Increase and the International Debt Situation," Statement before the U.S. House of Representatives, Subcommittee on International Trade, Investment and Monetary Policy, May 3, 1983.

"U.S. Energy Trade Policy in the Pacific Rim," Statement before the U.S. Senate, Subcommittee on East Asian and Pacific Affairs, Committee on Foreign Relations, July 19, 1983.

"The Need for an IMF Quota Increase," Statement before the U.S. House of Representatives, Subcommittee on Foreign Operations of the Appropriations Committee, September 20, 1983.

"The U.S. Trade Deficit: Causes and Cures," Statement before the U.S. House of Representatives, Ways and Means Subcommittee on Trade, April 10, 1984.

"Foreign Trade and the Balance of Payments," Statement before the Joint Economic Committee, May 1, 1984.

"The Competitiveness of the Dollar," Statement before the U.S. Senate, Subcommittee on International Finance and Monetary Policy, June 6, 1984.

"U.S. Economic Growth and the Third World Debt: Monetary, Fiscal, and Exchange Rate Policies of the Industrialized Countries," Statement before the U.S. Senate, Subcommittee on International Economic Policy, October 9, 1985.

"U.S. Economic Growth and Third World Debt: Credit Flows of the Private Banking System," Statement before the U.S. Senate, Subcommittee on International Economic Policy, October 10, 1985.

Articles

"A New Measure of International Liquidity," National Banking Review, December, 1964.

"The Demand for Money: The Evidence from the Short-Run Date," Quarterly Journal of Economics, May, 1965.

"Optimal International Reserves," Economic Journal, June, 1966.

"Borrowers in International Capital Markets," National Banking Review, September, 1966.

"The Demand for Money in South Africa," South African Journal of Economics, December, 1966.

"New Foreign Bond Issues in Europe," Lloyds Bank Review, October, 1967.

"Some Evidence on the Burden of Balance of Payments Adjustment," Western Economic Journal, December, 1967.

"The Transactions Demand for International Means of Payments," Journal of Political Economy, February, 1968.

"Optimal International Reserves: A Reply," Economic Journal, December, 1968.

"Sources of Instability in the International Accounts," Weltwirtschaftliches Archiv, Vol. 1, 1970.

"Wealth and International Reserves," Review of Economics and Statistics, May, 1970.

"The United States Balance of Payments in 1968," Journal of Money, Credit, and Banking, August, 1970.

"International Capital Movements and Monetary Equilibrium: Comment," American Economic Review, December, 1970.

"The Effectiveness of the Principles of Economic Course," Business Education Forum, May, 1971.

"More on Projecting, Forecasting, and Hindcasting," Journal of Money, Credit, and Banking, May, 1971.

"The International Monetary Base and the Euro-Dollar Market: Comment," Kredit und Kapital, Beiheft 1, 1972.

"International Adjustment and Optiomal Reserves," (with Ronald Britto), International Economic Review, February, 1973.

"The Costs and Benefits of the Dollar as a Reserve Currency: Discussion," American Economic Review, May, 1973.

"Adjustment Costs, Optimal Currency Areas, and International Reserves," (with M. Kreinin), Essays in Honor of Jan Tinbergen, W. Sellekaerts ed., New York: International Arts and Sciences Press, 1974.

"Foreign Investment: The Hawaiian Experience," Columbia Journal of World Business, Fall, 1974.

"International Reserves, Money and Global Inflation," Finance and Development, March, 1976, reprinted in B. Balassa, ed., Changing Patterns in Foreign Trade and Payments, 3rd edition, Norton 1977; also in Mercado, Buenos Aires, 18 March 1976.

"The Choice of an Exchange Rate System: Theory and Practice," International Monetary Fund, December, 1976.

International Reserves and World-Wide Inflation," IMF Staff Papers, March, 1976; reprinted in USIA, Portfolio, Vol. 4, No. 5, 1977.

"The Choice of an Exchange Rate System for a Developing Country," Cuadernos de Economia, August, 1977.

"The World Money Supply: Concept and Measurement," (with W. Day), Weltwirtschaftliches Archiv, December, 1977.

"The Monetary Approach to the Balance of Payments: Introductory Survey," (with R. Rhomberg) in IMF, The Monetary Approach to the Balance of Payments, Washington, D.C., 1977.

"A Step at a Time, The IMF Moves Toward Its Goal," Management, June/July, 1978.

"Determinants of Exchange Rate Practices," Journal of Money, Credit, and Banking, August, 1978; reprinted in C.F.A. Digest.

"The Changing Role of the International Monetary Fund," (with A. Crockett), Kredit und Kapital, August, 1978.

"Reserves Currency Preferences of Central Banks," (with M.Knight), Princeton Essays in International Finance, No. 131, December, 1978.

The Demand for International Reserves Under Fixed and Floating Exchange Rates," (with M. Khan), IMF Staff Papers, December, 1978.

"The Changing International Monetary System," in: Tariffs, Quotas, and Trade: The Politics of Protectionism, Institute for Contemporary Studies, San Francisco, 1978.

"The Demand for Money and the Term Structure of Interest Rates," (with M. Khan), Journal of Political Economy, February, 1979.

"The Eurocurrency Market - A Demand Approach," Euromoney, February 1979.

"The European Monetary System," Management, May/June 1979.

"Choosing an Exchange Rate System," Finance and Development, June, 1977, reprinted in J. Adams, The Contemporary International Economy, St. Martin's Press, 1979.

"Exchange Rate Flexibility and Currency Areas," Zeitschrift fuer Wirtschafts und Sozialwissenschaften, 1979.

"The International Monetary System and World-Wide Inflation," Columbia Journal of World Business, Fall, 1976, reprinted in J. Adams, The Contemporary International Economy, St. Martin's Press, 1979.

"Further Evidence on the Relationship Between International Reserves and World Inflation," M. Boskin, ed., Economics and Human Welfare: Essays in Honor of Tibor Scitovsky, Academic Press, 1979.

"Country Risk Analysis," American Banker, July 25, 1980.

"Recycling OPEC Surplus Funds: Refining the Process the Second Time Around," Management, July/August, 1980.

"The Long-Run Role of the Dollar," Economic Review, Fourth Conference, Federal Reserve Bank of San Francisco, California, Fall, 1980.

"International Stabilization Policy Under Flexible Exchange Rates," Stabilization Policies, Federal Reserve Bank of St. Louis, 1980.

"Economic Theory and IMF Policy--Comment," Carnegie-Rochester Conference Series, Vol. 13, North-Holland Publishers, 1980.

"International Reserves and World-Wide Inflation: Further Analysis," IMF Staff Papers, March, 1981.

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"Why Do We Lend to Developing Countries?" Management, May/June, 1981.

"The North-South Dialogue: An American Perspective," Conference volume U.S./European Dialogue Congress, Alpbach, Austria; June, 1981.

"International Banking in a Multi-Currency World," The International Framework for Money and Banking in the 1980's, Gary Hufbauer, ed., Chapter 9, Georgetown University Law Center, Washington, D.C., 1981.

"The Role of Private Banks in Stabilization Programs: Comment," Economic Stabilization in Developing Countries, by William R. Cline and Sidney Weintraub, eds., The Brookings Institution, 1981.

"A New Asset in International Markets," (with D. Lamond) Management, January, 1982.

"Developing Country Problems Affect International Profiles," American Banker, pp. 42-50, 26 March 1982.

"Con indesacion, no hay inflacion que se detenga," (in Spanish) Revista IDEA, Buenos Aires, pp. 16-21, March, 1982.

"Determinants of LDC Indebtedness," (with Emanuel A. Frenkel), Columbia Journal of World Business, Spring, 1982.

"Indexing and Inflation," The Banker's Magazine, July/August, 1982.

"Internal Government Deficits and the Rise in International Liquidity," The Nation Review, 16 December 1982.

"The International Monetary Fund," Encyclopedia of Economics, D. Greenwald, ed., McGraw Hill, 1982.

"The European Economic Community (EEC)," Encyclopedia of Economics, D. Greenwald, ed., McGraw Hill, 1982.

"The Organization for Economic Cooperation and Development (OECD)," Encyclopedia of Economics, D. Greenwald, ed., McGraw Hill, 1982.

"Special Drawing Rights (SDR)," Encyclopedia of Economics, D. Greenwald, ed., McGraw Hill, 1982.

"The Dollar in the International Monetary System," The Political Economy of the United States, North-Holland Publishing Co., 1982.

"Comment on International Liquidity," The International Monetary System, J. Dreyer, G. Haberler, and T. Willett, eds., American Enterprise Institute, 1982.

"Money and Credit in the Euromarkets," (in Spanish) Cuadernos Economicos de ICE, No. 19, 1982.

"International Lending and the Debt of the Developing Countries," Portfolio, USIA, Vol. 9, No. 5, 1982.

"Country Risk and International Bank Lending," P. Wachtel, Crises in the Economic and Financial Structure, Lexington Books, 1982.

"Managing International Indebtedness," D. Fair and R. Bertrand eds., International Lending in a Fragile World, M. Nijhoff Publishers, The Hague, 1982.

"Why Should Congress Lend Foreign Banks a Hand?" Wall Street Journal, 19 July 1983.

"Regulatory Aspects of the World Debt Problem: Comment," CATO Journal, Spring/Summer, 1984.

"International Risk Management," (with Kaj Areskoug), Center for International Business Studies, Pace University, Paper No. 6, May, 1984.

"Haben sich die flexiblen Wechselkurse bewanrt?" in: Hans Seidel, editor, Geldwertstabilitat und Wirtschaftswachstum, Vandenhoeck & Ruprecht, Gottingen.

"The Debt Crisis," Managing International Development, July, 1984.

"Economic Outlook," Contemporary Policy Issues, (Western Economic Association). Vol. III, No. 1, Fall, 1984-85.

"How the IMF Could Revive Trade," Euromoney, September, 1984.

"External Debt in Foreign Currency," (in Portugese) in: ANAIS, XV Congresso Nacional de Bancos, Salvador, Brazil, November, 1984.

"World Trade and Monetary Order," forthcoming Journal of International Monetary Economics, (Goldwater Conference, Arizona State University, March 16, 1985).

"Foreigners Target the Vast US Market," San Francisco Chronicle, May 14, 1985.

The CHAIRMAN. Next, if Dr. Mussa would come to the table. This morning we are also happy to welcome Dr. Michael Mussa before the Banking Committee. He's been nominated to serve as a member of the Council of Economic Advisers.

Since 1977, Dr. Mussa has been a professor of economics at the graduate school of business at the University of Chicago. At the same time, he has served as a research associate at the National Bureau of Economic Research and published widely in economic journals.

At CEA, Dr. Mussa will be the so-called macromember, dealing with such issues as GNP growth, inflation, employment, and the balance of payments.

Dr. Mussa, before we begin, could I have you stand and be sworn.

[Whereupon, the witness was duly sworn.]

The CHAIRMAN. Senator Proxmire, do you have any opening statement?

Senator PROXMIRE. No opening statement. I have some questions.

The CHAIRMAN. Please proceed, Dr. Mussa.

STATEMENT OF DR. MICHAEL L. MUSSA, NOMINATED TO BE A MEMBER OF THE COUNCIL OF ECONOMIC ADVISERS

Dr. MUSSA. I have a brief opening statement, Mr. Chairman.

Mr. Chairman and members of this distinguished committee, it is an honor to appear befo e you today as the President's nominee to become a member of the Council of Economic Advisers. I would like to thank the President for the confidence he has expressed in me in making this nomination. I would also like to thank Senator Dixon for his kind remarks in introducing me to the committee.

RESPONSIBILITY AND QUALIFICATIONS FOR THE COUNCIL

If confirmed by the Senate, upon the recommendation of this committee, my responsibilities would be those of the macromember of the Council. Under the direction of the Chairman, I would be responsible for advising the President and senior officials of the administration concerning the aggregate performance of the U.S. economy, especially the behavior of national output, employment, and the price level, and concerning broad macroeconomic policies, especially fiscal and monetary policies. I would also represent the Council at the member level in determining the administration's economic forecast. Given the current importance of international economic issues, in particular the problems associated with large and persistent payments imbalances, and given my background and interests as an international economist, I would anticipate that advising on these issues would also be a significant part of my responsibilities.

My qualifications for membership on the Council of Economic Advisers derive primarily from my graduate training in economics and from 15 years of experience as an academic economist. My graduate studies in the Department of Economics at the University of Chicago focused largely on macroeconomics, international economics, and econometrics. From 1971-76, I served on the economics faculty at the University of Rochester, with the last 18 months on leave at the London School of Economics and at the Graduate Insti-

tute of International Studies in Geneva. I joined the faculty of the graduate school of business of the University of Chicago in January 1977, and was promoted to the William H. Abbott Professorship of International Business in 1980. I might also note 3 years of service on the business forecast panel of the University of Chicago, during which I prepared and presented forecasts of the aggregate performance of the U.S. economy.

In addition to my academic work, I have served as a consultant to the World Bank, as a visiting professor at the International Monetary Fund, and as a consultant to private businesses and associations. This experience has been valuable in my academic work and, I believe, will contribute to my effectiveness at the Council. However, my extensive past involvement with the Securities Industry Association in controversial issues dealing with commercial bank participation in securities market activities might give rise to the appearance of conflicts of interest if I were to become involved with these issues while at the Council. Accordingly, I have taken steps to recuse myself from any such involvement. I shall also avoid involvement with other issues that might give rise to conflicts of interest or the appearance of conflicts of interest.

Thank you, Mr. Chairman. I would now be pleased to answer any questions from the committee.

The CHAIRMAN. Dr. Mussa, it's my understanding that as a member of the Council of Economic Advisers you will not participate in matters that might affect certain companies in which you own stock until and unless you receive waivers to participate. Is that correct?

Dr. MUSSA. That is correct, yes.

The CHAIRMAN. It is my understanding that you will be on leave of absence from both the University of Chicago and the National Bureau of Economic Research while you serve at the CEA. Is that correct?

Dr. MUSSA. That is correct.

The CHAIRMAN. While a member of the CEA, do you agree to appear before this committee and any other duly constituted committee of the Congress when requested to do so?

Dr. MUSSA. I do.

The CHAIRMAN. In your opening statement you note that your responsibilities at the Council will be those of the macromember dealing with such subjects as GNP, inflation, employment, balance of payments, and other issues of broad monetary and fiscal policy.

Over the last few months, we've seen a great deal of change in the perception of the economy. What I'd like is just a general answer to my question on how you see this developing and including in that not only your outlook for the economy, whether the economic expansion will continue or not, but our reporting—it seems to me that where perceptions are so important in the economy and you get all of the stories and the psychology going—well, the growth rate is really slowing dramatically, and then several months later you find out, no, that was not correct; it was much better than we said.

Is there something wrong with the reporting as well and can we do a better job so we're not having, in addition to the real problems out there, adding perception problems?

REPORTING OF PERFORMANCE OF U.S. ECONOMY

Dr. MUSSA. Well, I think the Government's statistical agencies do the best job they can to report honestly the performance of the U.S. economy.

I think one of the difficulties we've been having recently is that some sectors of the economy have continued to perform quite strongly, while others have been performing more weakly. In particular, the goods-producing sector of the economy, in that sector, employment grew strongly in the early stages of the expansion but has leveled off over the last 2½ years or so, whereas employment has continued to grow strongly in the service sector of the economy.

The upward revisions in real GNP growth in 1985 were largely a consequence of an upward revision in the estimate of real services output sold to consumers.

I think that's an area where we have considerable difficulty in measuring what's actually going on in terms of economic performance on a current basis.

I might note that in the first half of this year we have seen a pattern which was similar to that in 1985, particularly in the second quarter. We saw the continuation of reasonably strong employment growth, particularly as measured by the household survey, combined with sluggish growth of real GNP. Now it may be—and we don't know the final answer yet—that the sluggish reported growth in GNP is a little bit overly sensitive to performance in the goods sector of the economy and when we have more complete information in the service sector will add a little bit of strength.

I wish there was something that could be done to improve the accuracy of the initial indicators that are released of economic performance. I believe there's a committee working actively on that issue at present within the administration and consulting with outside experts on that subject.

The CHAIRMAN. Beyond the actual use of the statistics, what is your analysis then of the current situation and what do you anticipate over the next few months?

Dr. MUSSA. In terms of the current situation, over the first half of this year, real GNP I think has grown a little bit more sluggishly than I would have anticipated. I said I served on the business forecast panel. It didn't release the formal forecast last December, but my estimate would have been something like 4 percent real GNP growth for 1986, about in line with the administration's forecast. And we've clearly fallen below that, particularly in the second quarter.

In my view, the decline in oil prices and the effect that that's had on the energy industry both in terms of employment and investment is part of the explanation for why we have fallen a little below the forecast of real growth performance. That's an event which has pain for the economy in the short term but which I think will produce higher real growth as we move to the second half of this year and particularly into 1987.

We did a little dynamic simulation of what the effects of an oil price decline would be based on what the effects of an oil price in-

crease were in 1973 and 1979, and we found the pattern there was, first, there was some gain for the eccnomy and then subsequently decline when oil prices went up. And if you reverse that, you would expect first some negative effects and then some positive effects.

So I think that the real growth performance being somewhat below what was anticipated in the first half is partly the consequence of what's been happening in the oil sector and I would expect that we're going to get more of the beneficial effects of the oil price decline in terms of real GNP growth later this year, particularly in 1987.

There was also substantial further deterioration of the real trade balance in the first half of this year, particularly in the second quarter, and that's kind of a quirk of the way in which we put together the real GNP numbers. The number of barrels of oil imported each day increased from a little over 5 million barrels to a little over 7 million barrels. So if we value each barrel of oil in calculating real GNP at 1982 prices, we're costing that oil at over $30 a barrel and we said real imports expanded because we increased 2 million more barrels at a price of $30 a barrel and, therefore, the real trade balance—real net exports and the GNP actually deteriorated between the end of last year and the second quarter of this year.

If you look at nominal net exports, rather than seeing a $12 billion decline, you actually see a $9 billion improvement. So I think there's been a little bit of distortion in that contribution.

But we have been anticipating a flattening of the trade balance and ultimately some improvement in the trade balance figures. We've not quite seen that yet but I would expect to see at least a flattening and probably some improvement as we move into the second half of this year and 1987.

The general decline in the level of real business investment from a very high level in 1985 I would also anticipate will end soon and it will be a little while before we see significant strength there, but by 1987 I would expect that the impact of lower interest rates, nominal and real interest rates, will begin to have some positive effect on the level of general business investment.

UNCERTAINTIES OF THE TAX BILL

The CHAIRMAN. What impact do you think the uncertainties of the tax bill and what it's going to look like have had? And I don't mean just in the conference, I mean all year long. I happen to feel that that's part of the problem of the sluggishness of the economy that investment decisions are being delayed, that it's affecting the growth in the economy. I happen to think that businesses can deal with bad tax law more easily than they can with not knowing what the tax law is.

What's your feeling about the uncertainties of what the Tax Code is going to look like and its impact on the economy?

Dr. MUSSA. I think the uncertainty about how the new Tax Code will treat business investment has been an important negative factor. I think also the general perception that business taxes will rise has not been encouraging to business investment.

There was also the quirk of the House bill and now the Senate bill eliminating investment tax credit effective January 1, 1986, and that may have boosted investment a bit toward the end of 1985. So we had particularly strong business investment in the fourth quarter of last year and some of that may have been shifting investment that otherwise would have taken place in 1986 to an earlier date in order to take advantage of the credit before it expired. So there may have been some time shift for that reason as well.

The CHAIRMAN. Senator Proxmire.

Senator PROXMIRE. Dr. Mussa, the Council of Economic Advisers has the function of being our expert economists advising the President and the Congress, the Federal Reserve Board and others on economic policy, on what policies we should follow.

As I indicated to the previous witness, I intended to ask you about what we can do to stimulate the economy when we're in a situation where we've had 5 years of back-to-back megadeficits, now over $200 billion—this year it will probably be the biggest in history, although it's the first year of Gramm-Rudman. And we have the prospect that we're going to have a drastic reduction in the deficit this year. We're supposed to, whether we go down to $154 or $144 billion, it will be an enormous reduction and it will have some effect. Most people would say it would have a considerable effect on slowing the economy down.

We have followed a very, very expansive monetary policy. So what do we do to stimulate the economy if it continues to move along—mosey along at a 1.1-percent annual rate of growth or if it slips into a recession? After all, this recovery is pretty long in the tooth now compared to others. It's been going on since 1982. This is the fifth year.

So what policies would you recommend that the Congress and the other branches of Government follow?

Dr. MUSSA. Well, first, I'm not certain that at this stage that additional stimulus is actually required in order to improve the growth rate from what it was experiencing before.

Senator PROXMIRE. Let me just interrupt to say you may be correct, but we're mandated by law to reduce the stimulus sharply in fiscal policy, are we not?

EFFECTS OF DEFICIT REDUCTION

Dr. MUSSA. With respect to fiscal policy, reduction of Federal fiscal deficit to the order of $150 billion from it looks like a figure a little over $200 billion in the current year, is going to have some negative impact on the level of real aggregate demand in the U.S. economy.

There is some controversy as to what is the best estimate of the magnitude of that negative impact. I'm not amongst—some extremists would say there's no negative impact, but I think the best estimates indicate that the multiplier is something between a half and unity if we talked about an across the board spending cut.

Now it does make a difference how it is one goes about cutting the Federal fiscal deficit. My understanding is a substantial part of the reduction is going to come not from cutting real spending or

from raising tax rates, but instead from the natural increase in tax revenue that results from the growth of nominal and real GNP.

Over and above that, to reduce the deficit, there's going to need to be some meaningful cut between fiscal 1986 and fiscal 1987 in overall real spending levels or some increase in tax rates in order to make the deficit target. Given where we are now, that is probably about half or perhaps a little bit more than half of the total job that needs to be done.

The question which would then need to be asked is, if we cut Federal spending in real terms by say three-quarters of 1 percent of GNP and we have multiplier associated with that of something between a half and unity, then the estimated effect next year would be to push the GNP for 1 year down half a percentage point or thereabouts below what it would otherwise be if we didn't make that reduction in Federal spending.

Now the question is: How strong is underlying growth in the economy? I guess my judgment continues to be that we're going to see the positive effects of the decline in oil prices, the positive effects of lower interest rates, and so forth, and so the danger in terms of aggregate economic performance from making the expenditure reduction between fiscal 1986 and fiscal 1987 is less than would otherwise be the case for many years in the economy.

Senator PROXMIRE. Now I noticed from your background statement you once authored a study sponsored by the Securities Industry Association refuting the claim that allowing commercial banks to underwrite municipal revenue bonds would reduce the cost of State and local financing.

Dr. MUSSA. Yes, that's correct.

Senator PROXMIRE. Now when I studied economics, I was taught that removing barriers to entering a market will increase competition and lower prices. That would certainly have been the conclusion of the economists for State and local government associations that have looked closely at the issue.

How were you able to come up with just the opposite conclusion?

Dr. MUSSA. Let me say before I answer your question that this is, of course, an issue from which I would recuse myself as a member of the Council. This would not be an issue that I would involve myself with while at the Council.

Do you want me to respond to the substance of the question? This goes back to what that study was.

Senator PROXMIRE. Well, you will recuse yourself, but you're a member of the Council and you're a very intelligent, able man and you obviously aren't bashful about expressing your views and, after all, this is a group of people—there are only three Council members now, is that right?

Dr. MUSSA. There are two now and there would be three.

Senator PROXMIRE. There will be three. You will have considerable influence. So maybe you can give me a 1-minute response.

Dr. MUSSA. I was responding to a specific study which had not only the claim that there would be interest savings to the issuers of revenue bonds but also by implication all municipal bond issuers, and there was an estimated magnitude of those savings based upon the bonds issued in 1977 I think was the base year, and the estimated savings and the present discounted value sense of interest

payments was, I believe, $412 million. Out of those estimated savings of $412 million, $7 million of those estimated savings came from reduced underwriting spreads and the other $405 million came from the assertion that as a result of bank participation in underwriting the yields at which purchasers of these bonds would buy them would diminish. The attractiveness of the bonds to the holders would be sufficiently enhanced by having banks underwrite that additional savings of $405 million over and above the $7 million of reduced underwriting spread would be available.

The $7 million of reduced underwriting spread is really the issue of the competitive effect of having banks enter the underwriting business.

I think if I go back and review that study I ultimately don't dispute the possibility of savings, not only on order of $7 million but perhaps on the order of $20 million in that regard.

But I found the evidentiary basis for the claim of an additional $400 million not to be very credible.

FLOATING EXCHANGE RATES

Senator PROXMIRE. As you know, the case for flexible exchange rates was pioneered by your former colleague at the University of Chicago, Dr. Friedman. We have now had freely floating exchange rates since the early 1970's. Some would argue the experiment has been a dismal failure. Excessive exchange rate volatility has burdened international trade and has cost the manufacturing sector millions of jobs.

Have floating exchange rates been a failure and, if so, what can we do to restore stability in our international monetary system?

Dr. MUSSA. I don't think the floating exchange rate system in and of itself has been a failure. What has been I think the source of dissatisfaction has been the wide fluctuations we've observed in both nominal and real exchange rates and one needs to look in assessing the behavior of a market-determined price about the economic forces that have underlaid movements in that price. And I would assign principal responsibility in this regard to wide fluctuations in economic policies among the major industrial countries and wide divergences in the policies that they have been pursuing.

I think the dollar was pushed down in nominal and also in real terms in the late 1970's because of concern that the United States was embarked on an excessively and essentially uncontrolled inflationary binge. And as the Federal Reserve provided more persuasive evidence that that was not the case, in 1981 and 1982 the dollar strengthened over that period.

I think the relatively strong performance of the U.S. economy in the current expansion and the weak economic performance of many other industrial countries, particularly in 1983 and 1984, contributed to somewhat greater strengthening of the U.S. dollar.

Senator PROXMIRE. By that line of reasoning, wouldn't the fiscal policy and the monetary policy of this country, which has been highly inflationary, contribute once again to an adverse situation?

Dr. MUSSA. If we adjudged the monetary policy at this stage to be highly inflationary in terms of its implications, then I think that it

would precipitate further declines in the foreign exchange value of the dollar.

Senator PROXMIRE. How do you judge present monetary policy?

Dr. MUSSA. I don't judge present monetary policy at this time as being highly inflationary. If we were to persist in the rates of monetary expansion that we have experienced over the last 1½ years for another couple years, then I think the broad range of historical evidence would suggest that——

Senator PROXMIRE. There's a lag involved, isn't there? Dr. Friedman found in his remarkable study over the years that there's a lag of 24 months or so. So if we pursue a policy for 1½ years, this very expansionary monetary policy, and we still have moderate inflation, we can't say, well, that shows that monetary policy doesn't really do it. The proof of the pudding is going to come in the next year or two if we continue an expansive monetary policy.

Dr. MUSSA. That's correct. I think in judging whether monetary policy is expansive or not, though, we need to look at indicators other than the rate of growth of monetary aggregates. If at this stage I saw a real economic growth accelerating rapidly, if I saw commodity prices rising rapidly, if I saw the other signs of an early return to more rapid inflation, then I would argue that monetary policy was now and had been over the last 6 months or so too easy.

I don't see those indications at present.

Senator PROXMIRE. You don't see them now, but your guru, Dr. Friedman, indicated that there's a lag involved and you wouldn't see it. You wouldn't expect to see it until some time next year.

Dr. MUSSA. There's usually a lag between the acceleration of monetary growth and the acceleration of broadly based measures of consumer prices or the deflator. The effect of inflation in other variables, however, is usually apparent somewhat earlier than that.

Senator PROXMIRE. Thank you.

The CHAIRMAN. Senator Heinz.

Senator HEINZ. Thank you, Mr. Chairman.

$200-PLUS BILLION DEFICIT

In your discussion with Senator Garn you were talking about economic forecasts for this year and next year and, as I understand it, we had about a $202 billion deficit for the first 10 months of this year.

What does that suggest we're going to have for the entire year of fiscal 1986?

Dr. MUSSA. Well, pretty clearly we're going to be over $200 billion.

Senator HEINZ. It's already over $200 billion and we have 2 more months to go. Does that mean we're going to have $230 billion?

Dr. MUSSA. I would think probably a little bit lower than that. I think there's probably one quarterly tax payment that's due in so that there may be some net revenue gain from that.

Senator HEINZ. Well, $225 or something in that range?

Dr. MUSSA. Something in that neighborhood.

Senator HEINZ. Now under Gramm-Rudman and assuming that the House goes along with what's on the debt ceiling bill, that part

of the debt ceiling bill, we'll come in—if we're going to avoid a sequester—somewhere between $144 and $154. Whether or not we avoid having a sequester—if we don't avoid a sequester, we're going to come in at $144, and that is a cut in spending—or in the deficit, excuse me, of roughly $75 billion, $75 to $80 billion. That's 2 percent or more of GNP, isn't it?

Dr. MUSSA. It's a little bit less than 2 percent of GNP at this time. One of the things which I've not had an opportunity to assess yet is how the deficit has been running more recently because there was the $20 billion cut due to the Gramm-Rudman action earlier this year for the last 7 months of the fiscal year.

I think the right question to ask is, at what annual rate is the deficit currently running? And that may well be below the $220 or $230 billion figure, even though that will be the cumulative deficit for the fiscal year as a whole.

Senator HEINZ. We all hope so. I'm a little discouraged about the $202 billion today.

Dr. MUSSA. So am I.

Senator HEINZ. And whatever it is, it's probably going to be too high and I suppose we can hypothesize whether the deficit is going to be 1.5 percent reduced under the formula under 1.5 or 2 percent of GNP—it's probably going to be in that range.

Now that classically is a fairly substantial reduction in fiscal stimulus, is it not?

Dr. MUSSA. Yes.

Senator HEINZ. Isn't that a big reduction?

Dr. MUSSA. Not unprecedented, but not trivial either.

Senator HEINZ. What are the consequences of that? You mentioned some good consequences. You mentioned that you thought interest rates would come down, both nominal and real.

Dr. MUSSA. I believe there would be such effects. I think Dr. Heller really discussed that issue more than I did. I think there will be some favorable effects on interest rates from reducing the fiscal deficit, though I'm not amongst those who assign to the fiscal deficit the primary role in explaining why nominal and real interest rates have been high in the 1980's. I think there would be some favorable effects in that regard.

I think I answered earlier that I think there are some negative effects from a general cut in Government spending and on the aggregate level of economic activity it was a multiplier of something between a half and unity.

Senator HEINZ. There will be a reduction of some kind in aggregate demand as a result of the policies we adopt.

Dr. MUSSA. Yes.

Senator HEINZ. And with industrial capacity being fairly low, with imports remaining fairly high, and apparently quite available since countries like Brazil feel compelled to export to service their debts as do other countries like Mexico and so forth, why isn't that a scenario, whether we like it not, for a pretty soft economy this year and next year?

Dr. MUSSA. As I say, I think it depends upon the assessment of what other economic forces are operating in the economy.

To give you an example not exactly relevant to current circumstances, between 1945 and 1946 we cut Federal spending from 25

percent of GNP to 11 percent of GNP and that was an enormous reduction in Federal spending and the result of that was not an economic catastrophe, despite predictions to the contrary. Now an important part of the reason for that was there was a lot of pent-up consumer demand that had been built up during the wartime period. So as we demobilized and reduced our military spending, civilian spending picked most of that up without dropping too much out in terms of aggregate output.

Now that's not the situation we're in at present, but I think we need to ask, are there other factors in the economy which are likely to be promoting acceleration of growth next year absent the cut in the fiscal deficit; and I believe that there are such forces at work.

Senator HEINZ. You mentioned the reduction in oil prices as a factor.

Dr. MUSSA. Yes.

Senator HEINZ. Obviously, all of the economists said a year ago, oh, this is going to be great. They overestimated the goodness and they underestimated the badness. The oil and gas industry in Texas and Oklahoma is a very substantial part of the investment sector, the capital equipment sector, and I gather by all economic accounts most economists feel that they were unnecessarily optimistic in their forecast as to how that was going to play out.

Why are we finally right today?

Dr. MUSSA. There's a sharp division of opinion amongst economists in terms of that assessment. We ran, as I said earlier, a simulation—what we call formally vector-auto regression, which is model-free analysis of the statistical inter-relationships amongst real GNP, the GNP deflator, oil prices, interest rates, monetary policy, and so forth. And we asked, what has been statistically the effect of increases in oil prices. There you get in the United States a couple of quarters where the effect is positive, followed by a quarter or 2 where the effect is neutral, followed by 2 years where the effect is big and negative.

And if you reverse that, then what you expect from a substantial decline in oil prices is a couple of quarters where the effect is negative, a quarter or two where the effect is neutral, and then a couple of years——

Senator HEINZ. Is that the basis on which we predicted it; that when oil prices went up things happen one way; if they go down they're going to happen upsidedown like that?

STATISTICAL RESULTS OF OIL PRICE DROP

Dr. MUSSA. Well, I wouldn't place unitary weight on that simulation. If I did, I would be forecasting on the basis of those statistical results real GNP of——

Senator HEINZ. But I gather that is a substantial element in the forecast. We've looked at what happened when oil prices went up. We haven't had a situation where oil prices and energy prices have dropped dramatically, have we? We don't have any historical experience there, do we?

Dr. MUSSA. I think there actually was an experience earlier in the 1950's. Commodity prices got really pushed up in the Korean

war and then there was a substantial falloff a little bit later on. So there is some experience of that kind.

I was going to say that if I bought those statistical results as an accurate description of what we should anticipate next year, then we would be projecting 10 percent real GNP growth, which is too much.

Senator HEINZ. All I'm trying to figure out is where the effects of those reduced oil prices are going to be felt. Logically, you would expect them to free up more income for people and that there would be therefore some consumer demand.

Of course, what's actually happened is that imports appear to have taken care of any additional consumer demand, at least as it impacts our domestic economy. And one of the things that concerns me is that the decline in oil prices has also been accompanied by a decline of the dollar and, of course, oil prices are denominated in dollars. So while you would normally think that the declining dollar would be to our advantage in terms of strengthening our trading position, in fact there is an offset to that, the declining dollar makes energy inputs which are based on the dollar denomination of crude oil prices—energy inputs to our trading competitors a good deal cheaper.

Could that be a factor in why things aren't quite as rosy as we'd like them to be?

Dr. MUSSA. It may be a factor for the Japanese. For us the oil price is down to less than half its level, whereas for Japan it's down to about a third of the level prevailing at the end of last year. That's the effect of the strengthening of the yen vis-a-vis the dollar and that's reduced their imported materials costs more than it's reduced our imported materials costs.

Senator HEINZ. If you add it all up together, what would be your best estimate of economic growth for fiscal 1987?

Dr. MUSSA. For fiscal 1987?

PREDICTION OF 4 PERCENT GROWTH RATE

Senator HEINZ. The budget year beginning October 1?

Dr. MUSSA. Well, I think at the beginning of last year I probably would have said a little over 4 percent for 1986 as a whole. I think that's been displaced in time and I think that that's probably what we're going to get over the next fiscal year. That is to say, I expect stronger growth starting probably with the third quarter of this year.

Those timing things, though, are very difficult to get. My first forecasting exercise was in June 1982 and I said the expansion is going to start July 1, and it started, instead, December 1. So I overshot for my initial forecast and then undershot for the next one. And there's always some danger that that will happen.

But I think evidence and logic suggest that lower oil prices are good for the American economy, not bad for the American economy.

Senator HEINZ. They should be, all other things being more or less equal, but for some reason that good stuff still seems to be around the corner. We're all disappointed by the economic performance at least of the flash numbers for the second quarter. And

whether those are reestimated up or not, I remain concerned about the level of production and unused capacity numbers. What are we at currently in terms of capacity utilization?

Dr. MUSSA. I think the Federal Reserve Board's index is something like 78 percent. I don't keep that figure at the top of my mind, but it would indicate a fair degree of excess capacity. We rarely exceed 90 percent, so there's a question as to what 100 percent means in that index. But there's certainly in the industrial sector of the economy substantial capacity that could be utilized if demand for the products of those industries was somewhat stronger.

Senator HEINZ. I guess the sum and substance of my questions—I could believe 4 percent as a forecast—and Lord knows, I want to believe it—if there was some sign that capital investment was going to pick up in this country. Capital investment isn't going to pick up until capacity utilization picks up and I don't see any signs of that happening.

Dr. MUSSA. That's an issue about which we need to be again careful. The capacity utilization figures are heavily weighted toward the industrial sector of the economy as opposed to the service sector of the economy.

Now it's true there's more industrial sector than in the service sector of the economy, but you can get reasonably strong overall business investment demand even from the service sector of the economy.

I certainly don't think we're going to get it from the oil industry.

Senator HEINZ. Dr. Chairman, thank you very much.

Dr. Mussa, thank you.

The CHAIRMAN. Dr. Mussa, you've talked about the benefits of lower oil prices. From what OPEC said yesterday, apparently they're going to start going back up. So how does that fit in your equation forecast? If we haven't yet received the goodness that Senator Heinz has talked about and we've only had the badness, does the goodness come before the badness comes again?

Dr. MUSSA. Well, I think that OPEC is trying to push them up to the range of $15 a barrel or so.

The CHAIRMAN. The report I heard this morning is $18 to $22.

Dr. MUSSA. Even if they hit $18 to $22, oil prices would still be 50 percent down from where they were toward the end of last year. Also, the success of OPEC in achieving that objective I think has yet to be demonstrated.

If oil prices were to rise back to that range, then I would think that that would be first of all, negative news on the inflation front. Part of the deflation that we've observed in the first half has been the consequence of lower oil and energy prices and if we were to kick them back up to the range of $20 a barrel, then I think we would see the Consumer Price Index in particular react to that fairly rapidly. Probably the last monthly increase we saw in the CPI was due to the blip up in oil prices in June. Probably next month the CPI increase will be much less because oil prices fell in July and if they were pushed up in August it will translate through in September. And then I would think high oil prices over the intermediate to longer term would be a negative factor for the U.S. economy.

The CHAIRMAN. In the short run I would think the positive factor, the spot you talked about in the economy, in Texas and Oklahoma you would be helping.

Dr. MUSSA. Yes. Now I think probably the oil industry has adjusted to lower oil prices but not completely adjusted to a price of $10 a barrel or even $15 a barrel. If we went up to $20 a barrel, maybe now they have taken all the adjustments they would really want to in terms of employment and investment. Indeed, there might be some substantial resumption of drilling activity which is evidence they're going to stick around $20. I think they would wait and see evidence that that $20 a barrel was really here to stay on some more permanent basis than a couple of days before we get that type of reaction.

The CHAIRMAN. Just one more question on the tax bill. There's been a great deal of discussion about the so-called straddle of the deductions going away January 1 and the new tax rates not effective until July 1. I hear more and more about the negative impacts on the economy not just in anticipation for next year but on this year because of that so-called straddle.

Do you agree that that's a very negative factor as far as the economy is concerned to not have the rate reductions go along at the same time as the removal of the so-called loopholes or preferences or whatever you want to call them?

NEED TO ELIMINATE THE STAGGER IN TAX BILL

Dr. MUSSA. We refer to it as the stagger and we think it is important to eliminate or, if not eliminate, reduce the extent of that stagger. I think that it has both demand side effects on the economy and supply side effects on the economy in terms of the intertemporal structure of incentives for economic activity.

So I think it would be an important change to make in that bill and a positive change to make the rate cuts effective on the same date as the changes in deductions and other changes that are a revenue-raising effect.

The CHAIRMAN. But in order to do that you're going to probably get it out of business and increase taxes, so what do you gain? In other words, in these tradeoff games that we're constantly playing with that tax bill, you take it away with one hand and give it back someplace else, and so I would agree with you that it's important to remove the stagger, but in order to pay for the stagger it comes out of business. Are you going to just compensate or——

Dr. MUSSA. I don't know that I would necessarily recommend taking it out in the form of higher business taxes.

The CHAIRMAN. Oh, I don't recommend that. I'm just saying every time you hear anything from that conference, that's the game we're playing. It's politically popular to say, "Stick it to business." Let's face it. Don't worry about the economy or stimulation of the economy or incentive for investment and jobs or anything like that. It's just popular as hell to say, "Take it away from business and give it to the lower and middle classes." What else is new in our populist society?

So don't misunderstand me. I'm not recommending taking it away from business. I happen to think that whatever the tax bill

that finally passes is going to have a negative impact on the economy. But what do we politicians care about that as long we look good by November?

Dr. MUSSA. I think there's legitimate concern that the short-term macroeffect of the bill may be negative over the next year. I think the long-term economic effect is a very different matter. There I would expect significant positives from improving incentives by reducing marginal rates.

Also, I think this issue of leveling the playing field is an important question. To encourage investment in those lines of activity where true returns are not very large but tax breaks are big and to discourage it in lines of activity where true economic returns are high but tax breaks are not available, that's not a good policy. And I would expect some positive impact on economic performance from reversing that policy and I think the Senate bill——

The CHAIRMAN. I don't disagree with you. It's just whether we survive the transition or not. That's what I'm concerned about.

Dr. MUSSA. It's an important question.

The CHAIRMAN. Dr. Mussa, thank you very much.

The committee is adjourned.

[Whereupon, at 12:25 p.m., the hearing was adjourned.]

[Response to written questions of Senator Gorton and biographical sketch of nominee follow:]

RESPONSE TO WRITTEN QUESTIONS OF SENATOR GORTON FROM

MICHALE L. MUSSA

EXECUTIVE OFFICE OF THE PRESIDENT
COUNCIL OF ECONOMIC ADVISERS
WASHINGTON, D.C. 20500

August 8, 1986

Dear Senator Gorton:

In response to your questions of August 5, I offer the following responses. I am also forwarding a copy to Edward Malan, along with the transcript of my testimony, for the record.

Question 1: Do you believe that the economy will resume a higher growth pattern in the second half of this year? If so, what factors will contribute to higher growth? If not, what do you believe is slowing the economy down?

Answer: I believe that the U.S. economy is likely to move to higher growth in the second half of this year, especially higher growth than indicated by the preliminary results for the second quarter. The relatively strong performance of the leading economic indictors over the past six months is consistent with this forecast.

An important reason to expect higher real growth in the second half is that forces that held down first half growth seem likely to abate. Inventory investment fell between the first and second quarters, but further substantial declines do not appear likely. The ratio of inventories to final sales remains low. As final sales grow, inventories will need to grow at or above the rate experienced in the second quarter. Real net exports, as measured in the national income and product accounts, deteriorated sharply in the second quarter. But, again, further worsening of our real trade position does not seem likely. The lagged effects of the depreciation of the dollar which began in February 1985 probably should begin to improve the trade balance later this year and in 1987. In addition, stronger growth abroad, after the disappointing performance of West Germany and Japan in the first quarter, should contribute to some improvement in our exports. Declining employment and investment in the oil industries was also a factor holding down growth in the first half, but much of the adjustment of the oil industry to lower oil prices has probably been achieved. Continued growth of real consumer spending, strength in residential construction, and the beginning phase of a more positive response to lower oil prices should strengthen real growth in the second half.

Question 2: Do you believe that we must reduce the deficit in order to reduce our trade deficit? Or do you believe that the lower value of the dollar will ultimately help us control the trade deficit?

Answer: I believe that the reductions we have already seen in the value of the dollar will help to reduce our trade deficit and that we should begin to see some of this effect later this year and in 1987. The effect has probably been somewhat delayed because prices of many goods imported into the United States have only recently begun to reflect the higher values of foreign currencies. There is clearly a limit, however, to the extent to which foreign exporters will be willing to absorb the effects of higher currency values in their profit margins. I also believe that reducing the federal deficit can make an important contribution to improving our trade balances. To correct our substantial trade imbalances, we need a combination of appropriate policies both here and abroad.

Question 3: There is a very good chance that the Congress will be faced with a sequester order this August. If there is a sequester order, Congress can opt to structure a deficit reduction package that will bring the deficit projection into conformance with the Gramm-Rudman-Hollings targets. In your view, would it be better to achieve conformance with the deficit target through budget cuts or a combination of cuts and new revenues?

Answer: I believe that Congress needs to address the problem of the federal deficit primarily through restraint of the growth of real government spending. To meet the Gramm-Rudman-Hollings targets for fiscal 1987, some reduction in the level of real government spending will probably be necessary. Achieving such spending reductions is not easy. However, I believe that the results of the 1984 Presidential election indicated clearly the preference of the electorate to reduce the budget deficit through spending restraint rather than through tax increases. I should note that increases in tax revenues due to increases in national income will make an important contribution to reducing the deficit, without any increase in tax rates.

Question 4: Is it preferable to reduce the budget deficit through spending cuts, or a combination of spending cuts and modest tax increases?

Answer: As my previous answer indicates, I believe that it is preferable to reduce the budget deficit primarily through restraint in the growth of spending, with some real spending cuts required between fiscal 1986 and fiscal 1987. Increased tax revenues generated by rising national income will also play a major role in deficit reduction, given restraint on the growth of spending. Increased revenues from fees charged to users of Federal Government services will play a more minor role.

Question 5: Do you think that the financial markets reflect the likelihood that Congress will achieve the Gramm-Rudman-Hollings targets? Or do you think that they reflect a sense that somehow, Congress will be able to avoid the targets?

Answer: I believe that financial markets responded quite positively to the enactment of Gramm-Rudman-Hollings and to earlier evidence of the likelihood of its enactment. I believe that there probably has been and remains some skepticism about whether the deficit targets of Gramm-Rudman-Hollings will actually be achieved, and that an increase in such skepticism has adverse effects on the financial markets.

Sincerely,

Michael L. Mussa

Michael L. Mussa

The Honorable Slade Gorton
United States Senate
Washington, D.C. 20510

cc: Mr. Edward M. Malan, Senate Committee on Banking, Housing, and Urban Affairs

STATEMENT FOR COMPLETION BY PRESIDENTIAL NOMINEES

Name: MUSSA (LAST) Michael (FIRST) Louis (OTHER)

Position to which nominated: Member, Council of Economic Advisers Date of nomination:

Date of birth: 13 (DAY) 4 (MONTH) 44 (YEAR) Place of birth: Los Angeles, California

Marital status: Unmarried Full name of spouse: N/A

Name and ages of children: None

Education:

Institution	Dates attended	Degrees received	Dates of degrees
John Marshall High School	2/59 - 2/62	High School Diploma	2/62
Univ. of Calif. at Los Angeles	2/62 - 2/66	A.B.	6/66
Univ. of Chicago	9/66 - 6/71	M.A.	3/70
Univ. of Chicago	9/66 - 6/71	Ph.D.	6/74

Honors and awards: List below all scholarships, fellowships, honorary degrees, military medals, honorary society memberships, and any other special recognitions for outstanding service or achievement.

Phi Beta Kappa

Lilly Honor Fellow, Univ. of Chicago

William Rainey Harper Fellow, Univ. of Chicago

Prix Mondial Nessim Habif, Unif. of Geneva

Memberships: List below all memberships and offices held in professional, fraternal, business, scholarly, civic, charitable and other organizations.

Organization	Office held (if any)	Dates
American Economic Ass'n.	none	1966 to present
Econometric Society	none	1968 to 1974
Phi Beta Kappa	none	1966 to present
Council of the Univ. Senate Univ. of Rochester	none	1973 to 1975
Council on Research Univ. of Rochester	none	1973 to 1975
SEE ATTACHED SHEET FOR ADDITIONAL MEMBERSHIPS		

Employment record: List below all positions held since college, including the title or description of job, name of employment, location of work, and dates of inclusive employment.

Dates Employed	Employer	Location	Job Title
1/1/77 - present	Grad. Sch. of Business, University of Chicago	1101 E. 58th St. Chicago, IL	Professor Economic
10/7/76 - 12/15/76	Grad. Institute of Int'l. Studies	132 Rue de Lausanne Case Postal 53 Geneva, Switzerland	Research Fellow
6/2/75 - 9/30/76	London School of Economics	Houghton St., Aldwych, London England	Research Fellow
9/1/74 - 5/15/75	Grad. Center, City Univ.	33 W. 42nd St.	Professor Economics
9/1/71 - 6/30/76	Dept. of Economics Univ. of Rochester	River Campus Rochester, NY 14620	Assistant Associate Professor Economics
7/1/70 - 8/20/70	Univ. of Western Ontario	London, Ontario Canada	Instructo in Econor

Government experience: List any experience in or direct association with Federal, State, or local governments, including any advisory, consultative, honorary or other part-time service or positions.

Consultant, Council of Economic Advisers from October 1985 to the present

Published writings: List the titles, publishers and dates of books, articles, reports or other published materials you have written.

Books and Monographs:

A Study in Macroeconomics. Amsterdam, North Holland, 1976.

Competition and Borrowing Costs in the Municipal Revenue Bond Market: an Appraisal of the Evidence. Securities Industry Association, January 1979.

Taxation of Municipal Bonds (with Roger Kormendi). American Enterprise Institute, 1979.

The World Economic System: Performance and Prospects edited by Jacob A. Frenkel and Michael L. Mussa. Dober, Massachusetts: Auburn House Publishing Company, 1984.

Publications continued on attached sheets

Political affiliations and activities: List all memberships and offices held in and services rendered to all political parties or election committees during the last 10 years.

None

Political contributions: Itemize all political contributions of $500 or more to any individual, campaign organization, political party, political action committee or similar entity during the last eight years and identify the specific amounts, dates, and names of the recipients.

None.

Qualifications: State fully your qualifications to serve in the position to which you have been named.
(attach sheet)

Future employment relationships:

1. Indicate whether you will sever all connections with your present employer, business firm, association or organization if you are confirmed by the Senate.

All relationships have been severed except for the University of Chicago and the National Bureau of Economic Research as described in the attached correspondence to Dr. Beryl W. Sprinkel and David Martin.

2. As far as can be foreseen, state whether you have any plans after completing government service to resume employment, affiliation or practice with your previous employer, business firm, association or organization.

I plan to return to the University of Chicago.

3. Has anybody made you a commitment to a job after you leave government?

See #2 above.

4. Do you expect to serve the full term for which you have been appointed?

Yes

Potential conflicts of interest:

1. Describe any financial arrangements or deferred compensation agreements or other continuing dealings with business associates, clients or customers who will be affected by policies which you will influence in the position to which you have been nominated.

I will be on a leave of absence from the University of Chicago and the National Bureau of Economic Research. As a result, I will have an 18 U.S.C. §208(a) financial interest in both organizations. I will recuse myself from participating in any particular matters affecting these two entities.

2. List any investments, obligations, liabilities, or other relationships which might involve potential conflicts of interest with the position to which you have been nominated.

I have stock holdings in Boeing, Texas Electric, Union Electric, IBM, Standard Oil (of Ohio), Tenneco, Seagull Energy Company, and Houston Oil Trust and bond holdings at Texas Electric and the World Bank. I plan to seek waivers under 18 U.S.C. §208(b)(1) so that I can participate fully in matters affecting these sectors of the economy. Until I do obtain a waiver, or if a waiver is not available for any particular interest, I will recuse myself from participating in particular matters affecting these companies.

3. Describe any business relationship, dealing or financial transaction (other than tax-paying) which you have had during the last 10 years with the Federal Government, whether for yourself, on behalf of a client, or acting as an agent, that might in any way constitute or result in a possible conflict of interest with the position to which you have been nominated.

None.

4. List any lobbying activity during the past 10 years in which you have engaged for the purpose of directly or indirectly influencing the passage, defeat or modification of any legislation at the national level of government or affecting the administration and execution of national law or public policy.

As a consultant for the Securities Industry Association (SIA), I was actively involved in the issue of commercial bank involvement in securities activities from 1978 through 1982. I testified on their behalf before the Senate Banking Commitee, therefore, in order to avoid the appearance of a conflict of interest, I will recuse myself from participating in that issue while serving on the CEA.

5. Explain how you will resolve any potential conflict of interest that may be disclosed by your responses to the above items.

See attached letter to Mr. Martin.

Civil, criminal and investigatory actions:

1. Give the full details of any civil or criminal proceeding in which you were a defendant or any inquiry or investigation by a Federal, State, or local agency in which you were the subject of the inquiry or investigation.

None

2. Give the full details of any proceeding, inquiry or investigation by any professional association including any bar association in which you were the subject of the proceeding, inquiry or investigation.

None

MEMBERSHIPS (Continued from page 2):

Cmte. on Minority Student Concerns, Univ. Chicago	none	1980 to 1984
Cmte. on Int'l. Relations Univ. of Chicago	none	1980 to present
Policy Cmte., Grad. School of Bus., Univ. of Chicago	none	1980 to 1984
Student/Faculty Cmte., Grad. School of Bus., Univ. Chicago	none	1982 to 1984
Bus. Forecast Panel, Grad. School of Bus., Univ. Chicago	none	1982 to present
Council of the Univ. Senate Univ. of Chicago	none	1982 to 1985
Cmte. of the Council of the Univ. Senate, Univ. Chicago	Spokesman	1984 to 1985

PUBLISHED WRITINGS OF MICHAEL L. MUSSA (Continued from Page 3):

Articles -- published and forthcoming:

"A Monetary Approach to Balance of Payments Analysis, Journal of Money, Credit and Banking, August 1974; translated and reprinted in M. Blejer and A. Prozecanski (eds.) Economia Monetaria. Mexico, D.F., Centro De Estudios Moneterios Latinoamericanos, 1977.

"Tariffs and the Distribution of Income: The Importance of Factor Intensity, Specificity and Substitutability," Journal of Political Economy, November 1974.

"Consumption, Real Balances and the Hoarding Function," with Rudiger Dornbusch, International Economic Review, June 1975.

"Adaptive and Regressive Expectations in a Rational Model of the Inflationary Process," Journal of Monetary Economics, October 1975.

"Equities, Interest and the Stability of the Inflationary Process," Journal of Money, Credit and Banking, November 1975.

"Cyclical Adjustments of Wages, Prices and Employment: A Comment on Parkin, Sumner and Ward," in Karl Brunner and Allan Meltzer (eds.), The Economics of Price and Wage Controls, Carnegie-Rochester Conference Series, Vol. 2, Amsterdam, North Holland, 1976 (a supplement to the Journal of Monetary Economics).

"The Exchange Rate, the Balance of Payments, and Monetary and Fiscal Policy Under a Regime of Controlled Floating," Scandinavian Journal of Economics, June 1976, reprinted in Jacob Frenkel and Harry G. Johnson (eds.), The Economics of Exchange Rates. Reading, Massachusetts, Addison-Wesley, 1978.

"Tariffs and the Balance of Payments: A Monetary Approach," in Jacob Frenkel and Harry G. Johnson (eds.), The Monetary Approach to the Balance of Payments: Chicago Essays. London, Allen and Unwin, 1976.

"Our Recent Experience with Fixed and Floating Exchange Rates: A Comment on Kindelberger and McKinnon," in Karl Brunner and Allan Meltzer (eds.), Institutional Arrangements and the Inflation Problem, Carnegie-Rochester Conference Series, Vol. 3, Amsterdam, North Holland, 1976 (a supplement to the Journal of Monetary Economics).

PUBLISHED WRITINGS OF MICHAEL L. MUSSA (Continued from previous page):

Articles -- published and forthcoming:

"External and Internal Adjustment Costs and the Theory of Aggregate and Firm Investment," Economica, May 1977.

"The Welfare Cost of Inflation and the Role of Money as a Unit of Account," Journal of Money, Credit and Banking, May 1977.

"A Dynamic Theory of Foreign Exchange," in Michael Artis and A.R. Wobay (eds.), Studies in Modern Economic Analysis, proceedings of the 1976 Conference of the Association of University Teachers of Economics. Oxford, Basil Blackwell, 1977.

"Monopoly and Product Quality," with Sherwin Rosen, Journal of Economic Theory, August 1978.

"Dynamic Adjustment in the Heckscher-Ohlin-Samuelson Model," Journal of Political Economy, September 1978.

"On the Inherent Stability of Rationally Adaptive Expectations," Journal of Monetary Economics, October 1978.

"Macroeconomic Interdependence and the Exchange Rate Regime," in Rudiger Dornbusch and Jacob Frenkel (eds.), International Economic Policy: Theory and Evidence. Baltimore, Johns Hopkins University Press, 1979.

"The Two-Sector Model in Terms of Its Dual: A Geometric Exposition," Journal of International Economics, November 1979, reprinted in Jagdish Bhagwati (ed.), International Trade: Selected Readings. Cambridge, Massachusetts: MIT Press, 1980.

"Empirical Regularities in the Behavior of Exchange Rates and Theories of the Foreign Exchange Market," in Karl Brunner and Allan Meltzer (eds.), Policies for Employment, Prices and Exchange Rates, Carnegie-Rochester Conference Series, Vol. 11, a supplement to the Journal of Monetary Economics, Autumn 1979. Reprinted (in Italian) in Remy Cohen e Francesco Gravazzi (eds.), La Fluttuazione dei Cambi. Italy: Etas Libri, 1982.

"The Efficiency of the Foreign Exchange Market and Measures of Turbulence," (with Jacob Frenkel), American Economic Review Papers and Proceedings, May 1980.

Published Writings by Michael L. Mussa (continued from previous page):

Articles -- published and forthcoming:

"Public Policy Issues in International Finance," in International Economic Policy Research: Proceedings of a Colloquium Held in Washington, D.C., October 3-4, 1980, National Science Foundation, 1981.

"The Role of Official Intervention," Occasional Paper, No. 6, Group of Thirty, New York, 1981.

"Sticky Individual Prices and the Dynamics of the General Price Level," in Karl Brunner and Allan Meltzer (eds.), The Costs and Consequences of Inflation, Carnegie-Rochester Conference Series, Vol. 15, a supplement to the Journal of Monetary Economics, Autumn 1981.

"Sticky Prices and Disequilibrium Adjustment in a Rational Model of the Inflationary Process," American Economic Review, December 1981.

"Government Policy Toward the Adjustment Process," in Jagdish Bhagwati (ed.), Import Competition and Response. Chicago: University of Chicago Press, 1982.

Comment on "Trade in Differentiated Products and the Political Economy of Trade Liberalization," by Paul Krugman, in Jagdish Bhagwati (ed.), Import Competition and Response. Chicago: University of Chicago Press, 1982.

Comments on Papers by Hans Genberg and Donald Coes and Panel Discussion in John Williamson (ed.), Exchange Rate Rules: The Theory, Performance and Prospects of the Crawling Peg. London: Macmillan, 1981.

"A Model of Exchange Rate Dynamics," Journal of Political Economy, February 1982.

"Imperfect Factor Mobility and the Distribution of Income," Journal of International Economics, February 1982.

"Exchange Rate and Price Level Dynamics in a Simple Monetary Model," in Jagdeep Bhandari (ed.), Exchange Rate Determination and Adjustment. New York: Praeger, 1982.

"Optimal Economic Integration," in Pedro Aspe Armella, Rudiger Dornbusch and Maurice Obstfeld (eds.), Financial Policies and the World Capital Market: The Problem of Latin American Countries. Chicago: University of Chicago Press, 1983.

PUBLISHED WRITINGS OF MICHAEL L. MUSSA (Continued from previous page):

Articles -- published and forthcoming:

"U.S. Macroeconomic Policy and Third World Debt," The Cato Journal, v. 4, no. 1, Spring/Summer 1984, pp. 81-95.

"The Theory of Exchange Rate Determination," in John F. O. Bilson and Richard Marston (eds.), Exchange Rate Theory and Practice. Chicago: University of Chicago Press, 1984.

"Asset Markets, Exchange Rates and the Balance of Payments," (with Jacob A. Frenkel) in Ronald W. Jones and Peter B. Kenen (eds.), The Handbook of International Economics, vol. II. Amsterdam: North Holland, 1985, pp. 679-747.

"Official Intervention and Exchange Rate Dynamics," in Jagdeep S. Bhandari (ed.), Exchange Rate Management and Uncertainty. Cambridge, Massachusetts: MIT Press, 1985, pp. 1-30.

"Safety and Soundness as an Objective of Regulation of Depository Institutions: Comment on Kareken," Journal of Business, v. 59, no. 1, January 1986, pp. 97-117.

"Commentary on Is the Strong Dollar Sustainable?", proceedings of the Conference on the U.S. Dollar -- Recent Developments, Outlook and Policy Options, Federal Reserve Bank of Kansas City.

"Competition, Efficiency and Fairness in the Financial Services Industry," proceedings of Mid-America Institute Conference on Financial Services, Ballinger Publishing Company, forthcoming.

"Nominal Exchange Rate Regimes and the Behavior of Real Exchange Rates: Evidence and Implications," Carnegie Rochester Conference Series on Public Policy, forthcoming.

"Average Protection and Economic Policy."

PUBLISHED WRITINGS OF MICHAEL L. MUSSA (Continued from previous page):

Current Working Papers:

"Rational Expectations Models with a Continuum of Convergent Solutions," NBER Technical Working Paper, No. 41, June 1984.

"Economically Sensible Solutions for Linear Rational Expectations Models with Forward and Backward Looking Dynamic Processes, NBER Working Paper Series, No. 1398, July 1984.

"The New Protectionist Threat to World Welfare," edited by Dominick Salvatore, Fordham University and The United Nations. North-Holland Publishing Co., Inc.

"The Economics of Content Protection," NBER Working Paper Series, No. 1457, September 1984.

"The Adjustment Process and the Timing of Trade Liberalization," NBER Working Paper Series, No. 1458, September 1984.

"The Real Exchange Rate as a Tool of Commercial Policy," NBER Working Paper Series, No. 1577, March 1985.

"Macroeconomic Policy and Trade Liberalization," paper prepared for the Country Policy Department of the World Bank, May 1985.

"A Limited Stochastic Rational Expectations Model of the Current Account and the Real Exchange Rate."

PUBLISHED WRITINGS OF MICHAEL L. MUSSA (Continued from previous page):

Congressional Testimony and Miscellaneous:

Statement and background paper entitled, "The Taxable Bond Option: An Appraisal of Its Economic Effects," Hearings on the President's 1978 Tax Reduction and Reform Proposals, Committee on Ways and Means, U.S. House of Representatives, March 16, 1978.

A Critical Appraisal of the Taxable Bond Option, pamphlet, with Roger Kormendi, April 1978.

"The Taxable Bond Option: Boondoggle or Bonanza," speech before the Local Government Law Section of the American Bar Association Convention, New York, August 1978.

"Bank Underwriting and Borrowing Costs for Revenue Bond Issues," The American Banker, February 1, 1979.

"Response to the Dealer Bank Association Claims Concerning Interest Savings from Bank Underwriting of Municipal Revenues Bonds," paper presented to the Securities and Exchange Commission, the Federal Reserve Board, the United States Treasury, and the Subcommittee on Financial Institutions of the U.S. House of Representatives, May 14, 1979.

"What Increasing a Bank's Underwriting Power Would Not Do," letter to the editor of the New York Times, June 13, 1979.

"Competition, Combination and Commercial Bank Involvement in the Municipal Revenue Bond Market," paper presented to the Securities and Exchange Commission, the Federal Reserve Board, the United States Treasury, and the Subcommittee on Financial Institutions of the U.S. House of Representatives, June 27, 1979.

Testimony before the Subcommittee on Financial Institutions of the U.S. House of Representatives, June 27, 1979.

Statement to the Senate Banking Committee, October 22, 1981.

Statement and Testimony before the Subcommittee on International Trade, Investment and Monetary Policy of the House Committee on Banking, Finance and Urban Affairs, November 1, 1983.

Testimony before the Treasury and Civil Service Committee on International Monetary Arrangements of the House of Commons (U.K.), in Washington, D.C., June 4, 1985.

Qualifications (from page 4):

Michael L. Mussa is the William H. Abbott Professor of International Business at the Graduate School of Business of the University of Chicago. After completing his undergraduate studies in economics and mathematics at the University of California at Los Angeles, Professor Mussa did his graduate work in economics at the University of Chicago where he received his M.A. and Ph.D. in economics. From 1971 to 1976 he was on the faculty of the Department of Economics at the University of Rochester. During this period, he was also a visiting faculty member at the Graduate Center of the City University of New York, the London School of Economics, and the Graduate Institute of International Studies in Geneva, Switzerland. In 1976 Professor Mussa joined the faculty of the Graduate School of Business of the University of Chicago as Associate Professor of Business Economics. In 1980, he was promoted to full professor and then to the Abbott Chair. In 1981, he received the Prix Mondial Nessim Habif from the University of Geneva for his research in international economics.

Professor Mussa's main areas of research have been in international trade, finance, macroeconomics, monetary economics, and municipal finance. In addition to research and teaching, Professor Mussa has served as one of the editors of the Journal of Business, as a member of the Business Forecast Panel for the Graduate School of Business, and as a consultant to the World Bank. He is a member of the American Economic Association and former member of the Econometric Society, the Council of the University Senate at the University of Rochester, the Council on Research at the University of Rochester, and a member of Phi Beta Kappa.

His publications include A Study in Macroeconomics, Taxation of Municipal Bonds (with Roger Kormendi), as well as numerous articles in the Journal of Political Economy, the Journal of Monetary Economics, the Journal of Money, Credit, and Banking, the Journal of International Economics and other scholarly journals.

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